Dr. Wilfrid Creighton

FORESTKEEPING

A HISTORY OF THE DEPARTMENT OF LANDS AND FORESTS IN NOVA SCOTIA 1926-1969

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A HISTORY OF THE DEPARTMENT OF LANDS AND FORESTS IN NOVA SCOTIA
1926-1969

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Errata:

Preface xii	Caption of top photo should be "1934".
Page 57	Caption should read: "In the winter of 1936..."
Page 88	Line 21 figure should read "280,822,000 F.B.M."
Page 100	Caption should read "of Guysborough County"
Page 135	Caption should read: "Lady Baden-Powell (far right on stairs)..."
Page 153	Caption should read "...Titus Smith Elementary School, Fairview..."

14,025

DEDICATION

To the members of the
Department of Lands and Forests
with whom it was my pleasure
to work.

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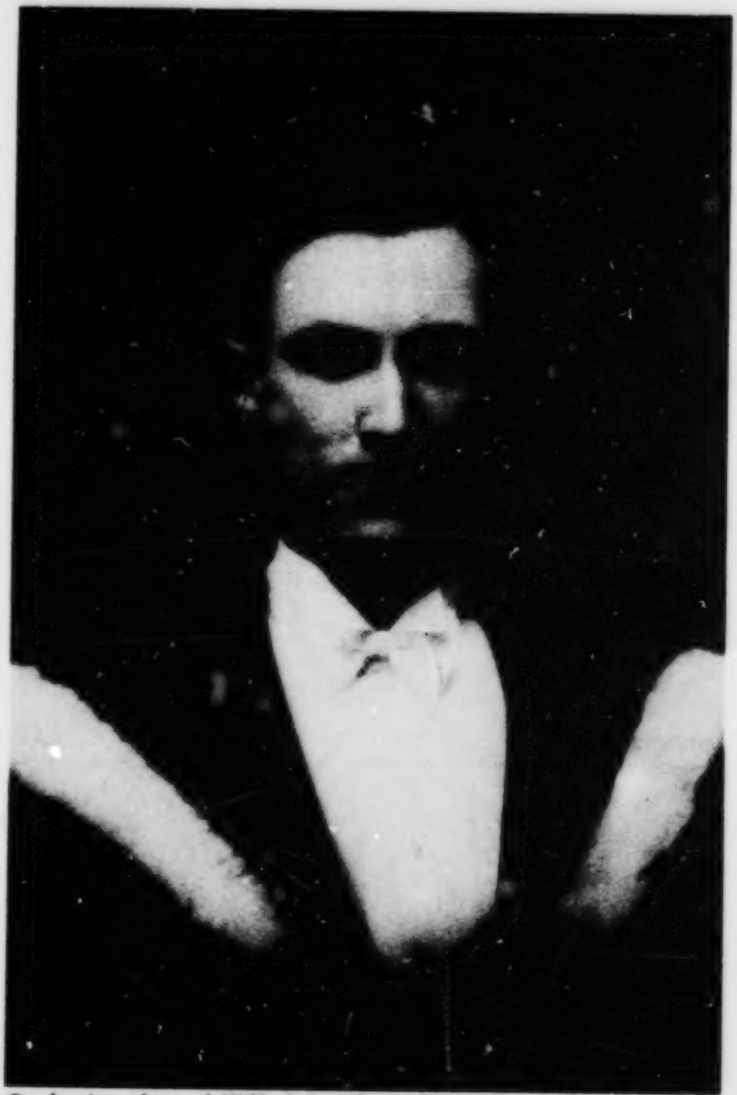

Graduation photo of Wilfred Creighton, University of New Brunswick, class of 1929.

FOREWORD

Dr. G.W.I. Creighton was born in Halifax, Nova Scotia, in 1904. In 1926 he was graduated from Dalhousie University with a Bachelor of Arts degree, and in 1929 from the University of New Brunswick with a Bachelor of Science degree in Forestry. In 1953 that university awarded him an honorary Doctor of Science degree.

Between 1931 and 1934 he pursued post-graduate studies in forestry in Germany at the University of Munich, and at the Schools of Forestry at Eberswalde and Thorandt.

Before his appointment with the Province of Nova Scotia, Wilfrid Creighton had worked with the International Paper Company, the Dominion Forest Service, and the Canada Power and Paper Corporation (now the Consolidated Bathurst Company).

Dr. Creighton first became known to me in 1934-35 when, as the young, newly-appointed Provincial Forester, he presented a series of illustrated lectures to students at the Nova Scotia Agricultural College, of whom I was one. The lectures, related to woodlot forestry, were based on his personal observations of forest practice over a period of three years in Europe.

Although he had not chosen education as a career, having a family background of distinguished educators made him appreciate the value of extension programs in the promotion of forestry. He was well aware of the importance of those government services he performed with such distinction.

In 1934, as the new Provincial Forester for Nova Scotia, Wilfrid Creighton "had no set duties or responsibilities", but "over the next few years [he] learned by trial and error what his position in the Department [of Lands and Forests] was supposed to be."

He came to his profession at a time when the department was still sufficiently young and unformed to respond to the touch of such a brilliantly talented individual. Lands and Forests programs started during his time have continued without major change (save in degree of activity), but with more generous budget resources than the poverty of funds and expertise that existed during much of his term of office.

Many of his successes were due to his patient nature and level-headedness. It was not unusual for him to obtain what he believed to be good for the department and the people of Nova Scotia by quietly planting the germ of an idea with one of the seven ministers under whom he served, and waiting for it to come back as a ministerial suggestion.

If, indeed, he seemed "stubborn and difficult" at times, it was only because some of us did not appreciate the delicate and difficult position he held as mediator between government and his staff. There were many occasions when he was keeping a new minister out of trouble while also supporting his own staff.

Although never given to socializing closely with staff members, he was a warm and sensitive person. He possessed a fund of anecdotal wit and wisdom. Some of his stories and anecdotes arising out of his experiences were, of course, more colorful than others.

It can be said of him that, while he walked with heads of board rooms and government halls, he "never looked too good nor talked too wise" for the small sawmill operator or woodlot owner. Those who had the good fortune to work closely with him recognized his keen capabilities and his rare gift of resolute reliability.

Much of the active history of the department and the forest industry of the province took place under his guidance and influence. Indeed, Wilfrid Creighton has earned, with his fellow forester Ralph Johnson, the title of father of forestry in Nova Scotia. As a member of the Maritime Section, Canadian Society of Forest Engineers (now the Canadian Institute of Forestry), he played a major part in the preparation and submission to the Minister of Lands and Forests of the C.I.F.'s policy document "Forestry, Economy and Post-War Rehabilitation in Nova Scotia".

His influence was most beneficial for the department and the province generally. That influence extended to the rest of Canada. He was president of the Canadian Institute of Forestry for the 1957-59 term, which covered the fiftieth anniversary of the society in 1958. While president, he appeared on behalf of the Institute before the House of Commons Standing Committee on Mines, Forestry and Water. He received the Centennial Medal as a nominee of the Canadian Institute of Forestry.

Under Wilfrid Creighton the Department of Lands and Forests entered a period of expansion and expertise that moved the reputation of Nova Scotia into the front ranks of forestry. One must feel that what he accomplished for the department and the province could not have been achieved by another.

Certainly he was the obvious person to write this history of the Department of Lands and Forests of Nova Scotia. A thoughtful reading of it will support my observations, which I am very pleased to have had the opportunity to make publicly.

Lloyd S. Hawboldt

Dartmouth, N.S.
October, 1986

Using the Zeiss Aerotopograph plotting machine at the Saxon State Forestry College near Dresden, Germany, 1932.

Playing hockey at Eibssee in the Bavarian Alps around New Year's, 1932 for the Munich Ice Skating Club (Wilf Creighton far right).

PREFACE

Several years ago Ralph Johnson asked me to assist him in writing a book about the forest industry of Nova Scotia. I agreed to write a chapter about the Department of Lands and Forests, and its predecessors the Department of Crown Lands and the Department of Forests and Game.

At the time I thought that I could complete this task in a few hours; but as I studied the subject I found there was much that I did not know, some things I had forgotten, and that others had been twisted in my memory and coloured by my background and views.

My background included a B.A. from Dalhousie, a forestry degree from the University of New Brunswick, and student work for the International Paper Company and the Federal Forest Service.

As graduation time approached I determined to work for private industry, and in the spring of 1929 I was on the upper Ottawa in the employ of the Laurentide Division of Canada Power and Paper Corporation. For most of the next two years I was in the woods in Quebec and Ontario as a timber cruiser, living in tents summer and winter and carrying out a variety of jobs from surveyor to dog teamster.

By the spring of 1931 the pulp and paper mills were hard hit by the Depression, and I was given leave of absence without pay, but with the expectation of a job in a year's time. In August I went to Germany to see European forestry methods, about which we heard so much, and I enrolled in the faculty of forestry at the University of Munich.

In the spring of 1932 there was still no job with the company, but I hoped there would be one in the fall, so I moved on to the Prussian State Forestry School in Eberswalde in Mark Brandenburg, north of Berlin, where I remained one semester. In the fall the hoped-for job was again postponed so I moved to the Saxon Forestry School at Tharandt near Dresden, where there was a good course in photogrammetry.

By this time I was quite fluent in the language and was able to see many things missed by visiting foresters, many of whom were professors from forestry schools in the U.S.A.

who were taken to see a number of showplaces but never to see any of the mistakes or failures.

Small private holdings comparable to our farm woodlots were not well cared for, and it was common practice to rob the leaf litter to add humus to the farmland. The large private forests and the state forests were given tender loving care and for the most part were park-like in appearance.

In Europe there are fewer tree species than in Canada, and in Saxony the commercial species were spruce and pine, with some beech, oak, ash, and larch. Other species such as birch, maple and some exotics were planted along the roadsides for aesthetic purposes. Spruce was grown on an 80-year rotation, pine and beech 120 years and oak as long as 300.

Economic conditions were quite different from those in Nova Scotia. Timber was marketed locally at high prices. It had become common practice to clearcut small areas and replant them, but over the rotation period there could be as many as five thinnings or intermediate cuts before the final clearcut. The volume of wood removed in these operations could equal the final cut, but of course the larger trees in the final cut brought a higher price.

Everything removed from the forest was saleable. Branches were cut in short lengths and tied in bundles for faggots. Poles could be sold for a variety of purposes, and where pine was grown on sandy soil a stump was sold for a few cents and two or three men would dig out the stump and roots, going down eight or ten feet to get the big tap root. The soil then had to be replaced in the hole and finally the area looked like a freshly ploughed field.

Originally the natural forests of Saxony had been mixed, but for a long time plantations usually had only one tree species. At first this proved very successful, but after two rotations of spruce some problems appeared. By the third rotation raw humus tended to build up and tree growth slowed down. Some attempts were made to correct the situation with applications of lime and by planting other trees mixed with the spruce.

Many exotics had been planted, and a few had a limited success, but most proved to be a failure after some years.

In the larger forests European red deer and roe deer were plentiful and caused extensive damage to the forest and to farm crops. Expensive measures were taken to reduce damage by building fences. When exotics were planted the deer would concentrate on them, and in one pole-sized stand where every tenth tree was a Douglas fir, every fir was completely ruined while the native spruce was damaged to a lesser degree.

The foresters knew every deer in their Revier, determining which ones should be culled. The State foresters culled some deer themselves, and could keep the heart, liver, kidneys — and the eye teeth, which were prized for jewelry. The carcass was State property and the meat was sold in butcher shops.

Hunting was a privilege of the favored few and the large private landowner had exclusive hunting rights on his own land, and could determine the form of game management, which included selling shooting rights to wealthy individuals.

Shooting was often from blinds, or a group might be posted at intervals along a road and beaters with sticks would drive the deer towards the hunters. The European red deer is very regular in its habits and after watching for several weeks a forester would know that a deer would be at the same spot at a certain time each day. A blind would be built near at hand, and the hunter would hide in the blind half an hour ahead of the expected arrival time, and then bag his deer with little or no effort.

Having watched Hitler rise to power, I returned to Nova Scotia in May 1934 and was appointed Provincial Forester, a position which sounded more important than it really was.

My interests were still with industry, and if at any time during my first two years with government a job with industry had been available, I would have taken it gladly. But by the time an offer finally came, I had decided there was an interesting future with the Department of Lands and Forests and I thought I was the right man for the job.

Government service was different from industry. There was not the constant pressure to produce, but there were pressures and frustrations of other kinds, and one had to be patient and accept blame if things went wrong and let someone else have the credit if they went right.

In preparing this history I was helped by many persons, including the late Dr. Bruce Fergusson, Miss Shirley Elliott,

Eighty-year-old Norway spruce in a forest revier near Tharandt. The grave monument of Heinrich Cotta, "father of German Forestry", is in this forest.

Miss M.A. Murphy, R.S. Johnson, J.R. March, J.F. Archibald, R.M. Schofield, H.B. Robertson, Owen Barr, Ernie Boehk, Merrill Prime, Gary Rix and others, and to them I offer my thanks.

Wilfrid Creighton

Halifax, Nova Scotia
October, 1982

Beginnings

The Department of Lands and Forests was created in 1926 by the Lands and Forests Act, which merged the Department of Crown Lands with the Department of Forests and Game. The Department of Forests and Game had been formed in 1921, replacing the Game Commission which had administered the game laws for many years. The Department of Crown Lands was much older, its roots going back to the early years of English rule in the province. Just when this Department began to function under that name is difficult to determine, but surveys for various purposes were carried out from earliest colonial times. *The History of Annapolis County*[1] by Calneck and Savary states that David Dunbar was appointed Surveyor General in 1730, being the first person to hold that office before the founding of Halifax. Calneck, however, confused two distinct offices with different though sometimes overlapping functions.

Colonel David Dunbar was a New Englander who was Surveyor General of His Majesty's Woods on the Continent of America. His duties were to survey and reserve areas with trees suitable for masts and other ship's timbers and to mark trees suitable for masts with the Broad Arrow. In the minutes of His Majesty's Council at Annapolis Royal 1720-1739, edited by A.M. MacMechan, it states "that by an order-in-council dated at St. James's, March 28, 1728, and a writing of the Lords of Treasury dated May 9, 1728, David

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[1] W. A. Calnek, *History of the County of Annapolis*, W. A. Savary, ed. (Toronto: William Briggs, 1897).

John Wentworth, Surveyor General of the King's Woods and Governor of Nova Scotia. NSGS Photo

Dunbar Esq. (Surveyor General of His Majesty's Woods on the Continent of America) is constituted Surveyor General of His Majesty's Woods in Nova Scotia, to make out and to set apart for His Majesty's use such tracts of his said Majesty's lands as shall be found upon survey, to be most proper for producing of masts et al."

Possibly Dunbar never came to Nova Scotia, but at least two deputy surveyors were appointed, and one, Mitchell by name, surveyed several tracts in the present Province of New Brunswick.

At a later date the office of Surveyor General of the King's Woods was held by John Wentworth, a position which he held while he was Governor of New Hampshire, and which he retained after the American Revolution when he came to Nova Scotia and became Governor of this province.

While a few grants of land were issued before the founding of Halifax in 1749, it was not until after that date that any serious attempt was made to have the province settled by persons other than the Acadians.

On September 25, 1749 Charles Morris, a land surveyor from Massachussets, was appointed Surveyor General of Nova Scotia. Morris had been a captain with the New Englanders at the capture of Louisburg, and he was at Annapolis Royal in 1748. During the next hundred years four Morrises were to hold the title of Surveyor General, a title held by no other person. At that time the title Surveyor was used in a more general sense than today. There were surveyors of fences, surveyors of lumber, and others in addition to land surveyors.

Charles Morris as Surveyor General was responsible for the survey of the boundary lines of land grants, for the survey of roads and for any other land surveys that might be required. Maps and plans would be prepared under his direction and all survey returns and maps and plans were under his charge. While Morris carried out some surveys himself, deputy surveyors were appointed for each district or county. The surveyors' returns which are filed in the vault at the Department of Lands and Forests have a wealth of information, and describe the conditions under which land surveyors worked.

In early times rum was legal tender in Nova Scotia, and axemen and chainmen employed on surveys commonly were paid so many shillings and so many gallons of rum. Ten shillings and two to five gallons of rum appeared to be a fairly common ratio, and in the list of supplies taken into the field by a surveyor rum and gin are found along with tea, sugar, molasses, salt, flour, cornmeal, salt pork, salt beef and potatoes. On the plan of survey submitted with the surveyor's return it is not uncommon to find an "X" at some point on a boundary line with the notation "Here we buried ye bottle". Possibly this may explain in part the overrun often found in some boundary lines.

The subject of land grants has been amply covered by J.F. Archibald in *Historical Highlights, Nova Scotia Crown Lands 1603-1972,*[2] by the late Reg Dickey (for many years land surveyor for Mersey Paper Company) and others, so it seems hardly necessary to devote much space to land grants here. However, it does seem proper to list the various officials who held office, and to highlight the legislation which preceded and finally was incorporated in the Lands and Forests Act.

During the period from 1749 to 1926, a great mass of legislation was passed dealing with Crown land, forest protection, timber grades, stream improvement to aid log drives, protection for game animals, birds, fish, furbearing animals, obstruction of rivers, and so on, but in this early legislation the Department of Crown Lands was not mentioned, and authority to enforce the legislation was vested in the justices in the County Sessions.

In 1761, or 12 years after the founding of Halifax, we find on page 67, Chapter 5 of the Acts of that year, an Act for preventing damages by unseasonable burning or firing of the woods. The justices in the several counties were authorized to give it in charge of the grand juries to affix and settle such regulations within the respective counties as they might judge to be most proper and convenient. From the preamble to this Act it is quite clear that there was little concern for damage to the woods—but rather for damage caused when fire, spreading from the woods, burned settlers' buildings and crops.

In 1763 there was an Act to control hedges, weirs and other obstructions in rivers which prevented passage of fish. This was followed in 1767 by an Act to prevent trespass on Crown Lands, and in 1772 an Act declaring what shall be deemed merchantable timber for export to Great Britain. In 1774 and 1775 there was legislation to prevent waste and destruction of pine and other timber trees on certain reserved and ungranted lands in the province, but firewood and underwood used in fishing, found within one-half mile of the sea, were exempted from the regulation.

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[2] Joseph F. Archibald, *Historical Highlights, Nova Scotia Crown Lands 1603-1972* (Halifax: N.S. Dept. of Lands and Forests, 1972).

On November 3, 1781, Charles Morris was succeeded as Surveyor General by his son — also named Charles — and so the Morris dynasty continued.

In an amendment to earlier acts relating to obstructions in streams, passed in 1786, dams were now required to have a waste gate or slope to permit the passage of fish, and owners of land through which rivers ran were entitled to exclusive rights of fishing.

On page 333, Chapter IV of the Acts of 1794, is found An Act for the Preservation of Partridge and Blue-Winged Ducks. The Act provided for a closed season for partridge from March 1 until September 5, and for ducks from April 1 until August 5. The Act did not apply to Indians or to poor settlers taking for their own use.

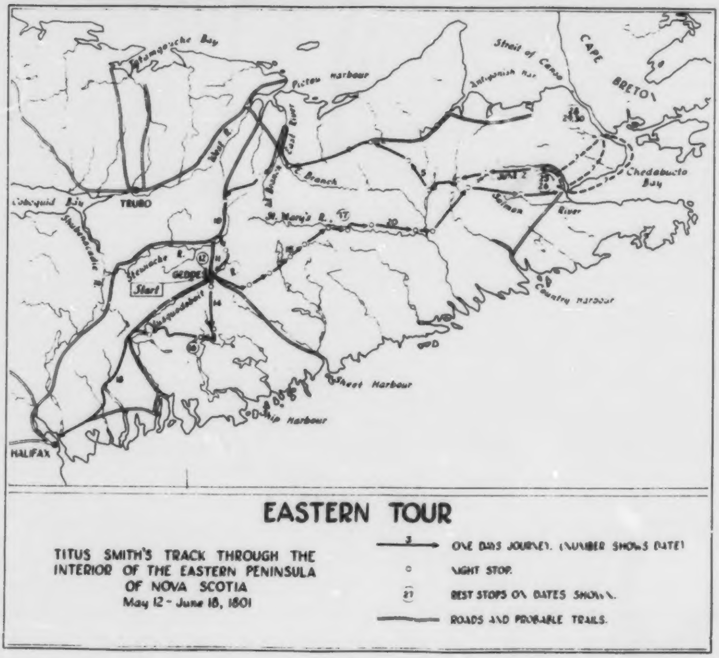
In 1801 there is an Act to revise and continue an Act made in the 36th year of His Majesty's reign, entitled an Act to Encourage the Killing of Wolves, Bears, Loup Cerviers and Wildcats. Here we find the initiation of bounty payments that were to continue in this province until very recent times.

Also in 1801, John Wentworth, Governor of Nova Scotia and Surveyor General of the King's Woods for British North America, commissioned Titus Smith to make a survey of peninsular Nova Scotia for the purpose of discovering land suitable for producing hemp and other naval stores and also to report on the species, size and quantity of timber. The original notes of Smith's survey carried out in 1801-02 are in the Public Archives of Nova Scotia. From these notes it is clear that a greater portion of Nova Scotia was fire barren and recent burn than is the case today.

On January 27, 1802 Charles Morris II was succeeded by his son Charles Morris III as Surveyor General.

In 1816 Snipe and Woodcock were protected from March 1 until September 1, with a penalty of 10 shillings for an offence. Again the Act did not apply to Indians and poor settlers.

Portrait of Titus Smith and a portion of his track through the interior of Nova Scotia. Courtesy of the Public Archives of N.S.


Tatamagouche Bay
Pictou Harbour
Strait of Canso
Antigonish Har.
CAPE BRETON
Chedabucto Bay
East River
E. Branch
St. Mary's R.
Salmon River
Country Harbour
Sheet Harbour
Ship Harbour
Cobequid Bay
TRURO
Shubenacadie
Musquodoboit
Start
HALIFAX
EASTERN TOUR
TITUS SMITH'S TRACK THROUGH THE INTERIOR OF THE EASTERN PENINSULA OF NOVA SCOTIA
May 12 - June 18, 1801
ONE DAYS JOURNEY. (NUMBER SHOWS DATE)
NIGHT STOP.
REST STOPS ON DATES SHOWN.
ROADS AND PROBABLE TRAILS.

An Act for the preservation of trout was passed in 1824 with a closed season from October 1 until January 1. A penalty of one shilling for each offence was provided and again there is an exemption for Indians and poor settlers.

John Spry Morris, a son of Charles Morris III, was appointed Commissioner of Crown Lands in 1827 and on April 6, 1831 he was appointed Surveyor General, succeeding his father.

In 1834 there is An Act for the Commutation of the Royal Quit Rents in this province, bringing to an end a matter that was resented by the settlers and a problem that must have been frustrating for those officials who were supposed to collect the rent. On page 91 of *The History of Annapolis County* it states that in 1739 Mr. Armstrong sent an officer of the garrison, Captain John Slater, to Minas to enforce the payment of quit rents by the settlers. Campbell's history of Nova Scotia[5] deals with quit rents at some length, explaining their nature and origin in this province:

> In the year 1759 Governor Lawrence issued a proclamation setting forth the conditions on which the public lands of the Province would be granted; intimating that they would be subject to a quit rent of one shilling sterling, yearly for every fifty acres — such rent to commence at the expiration of ten years from the passing of the grant and be paid to the Receiver General at Halifax or his deputy, for the use of his Majesty.

The rent was never systematically collected and the Government had suspended the collection indefinitely in 1811. During the next few years there was an abundance of legislation dealing with the sizes and grades of lumber for export, the incorporation of lumber companies, and the granting of authority to erect dams, abutments and piers on certain rivers.

In view of the subsequent history of lumbering and shipbuilding, it is perhaps worth mentioning that in 1838 John Spry Morris wrote that all large pine, and most large spruce, near tidewater and driveable streams had now been cut and lumber operations would soon come to an end in Nova Scotia. In making this prediction Morris, like many others, failed to realize that trees are a renewable crop and that they have persisted in growing in this province in spite of all the neglect and abuse to which they have been subjected.

[5] Duncan Campbell, *Nova Scotia in its Historical, Mercantile and Industrial Relations* (Montreal: John Lovell, 1873).

On page 26, Chapter XII of the Acts of 1840 is found some important legislation: an Act to establish sundry regulations for the future disposal of Crown lands within the Province of Nova Scotia. This Act provided for Land Boards composed of three or more persons in each county empowered to collect information and to receive applications for grants.

Information relative to ungranted land was to be transmitted by the Board and, on payment of the purchase money, an occupant was entitled to a grant not exceeding 200 acres. Upset or minimum price for ungranted land was set at one shilling sterling per acre.

Chapter XIX, page 32, of the Acts of 1843 is an Act for making regulations relative to the setting of snares for catching moose. The General Sessions were to make rules respecting the setting of snares, penalties, how recovered, and so on.

Chapter XLV, also for the year 1843, is an Act to continue and amend the Act to establish sundry regulation for future disposal of Crown lands within the province of Nova Scotia. The Governor-in-Council was authorized to settle the price of Crown land, also to settle the price of ungranted land on which improvements had been made by the applicant, and authority was provided for free grants to officers, non-commissioned officers and privates.

In 1844 there is a further Act for the preservation of moose. The Sessions were authorized to make rules regulating the taking of moose, and penalties were provided, not to exceed £5 for killing or £2 for selling.

On page 88, Chapter XLVII of the Acts of 1845 is an Act to Encourage the Killing of Wolves. The preamble to the Act states, "Whereas wolves have of late made their appearance in this Province, etc." A bounty for killing an adult wolf was set at 40 shillings, and 20 shillings for a whelp [pup]. The justices were to issue certificates, and payment was to be made from the office of the Provincial Secretary.

From stories handed down by word of mouth it would seem that wolves had been exterminated in the early 1800s, that they had reappeared in Nova Scotia following the Miramichi fire in 1825, and that shortly afterwards they had been exterminated again. Since wolves and caribou were present in New Brunswick and caribou were still plentiful in Nova Scotia, it is not surprising that wolves would appear in this province from time to time. In 1846 the bounty for killing a wolf was increased to £5, but the following year an Act to continue the Act to Encourage the Killing of Bears, Loup Cerviers, and Wildcats makes no mention of wolves.

On page 38, Chapter XXIII of the Acts of 1848 is an Act relating to the Crown Land Department of this province. In this Act the offices of the Surveyor General and Commissioner of Crown Lands for Cape Breton were abolished, and their duties were transferred to the Surveyor General, Nova Scotia.

It would seem that the title of this official was now Surveyor General and Commissioner of Crown Lands, and his salary was fixed at £480 sterling with an allowance for clerks and contingencies of office £200 sterling. The incumbent John Spry Morris complained about this salary, stating that it should be much larger. Joseph Howe replied to this complaint, finding fault with the work of Morris and in turn complaining that it was taking too long for surveys to be completed. John Spry Morris defended himself, pointing out that because there had never been a systematic survey of the province, individual surveys for grants were of necessity more time-consuming. Since a systematic survey of the province was not undertaken until very recent times, anyone with survey experience in Nova Scotia can feel some sympathy for the Surveyor General.

In the same Act, Henry W. Crawley, retiring as Commissioner of Crown Lands for Cape Breton, was given an allowance of £240 sterling per year, and Thomas Crawley, the retiring Surveyor General, £100 sterling per year.

In the Revised Statutes for the year 1851, Chapter 28 of the Crown Lands is set out in five sections:

SECTION 1	Boards, how constituted, their duties.
SECTION 2	Upset price, survey, report, improvements.
SECTION 3	Reservations, when they may be made and how disposed of.
SECTION 4	Improved lands, price how fixed, how granted.
SECTION 5	Indian reserves and free grants. Price not less than 1s. 9d. per acre.

Also in 1851, Chapter 43, of Surveyors of Land.

SECTION 1 Deputy Surveyors empowered to administer oaths.

Chapter 28 further states:

> All surveyors appointed by the Surveyor General as his deputies shall administer an oath to their chainmen before they proceed upon any survey, that they will well and truly perform the service according to the best of their skill and judgement under the directions they shall receive from such deputy surveyors.

In the same year very detailed rules were established for different lumber products, such as boards, deals, planks for export, shingles, clapboards, laths, staves, timber, and the like. Wood products had to be surveyed and required a surveyor's certificate. The duties of the surveyor of lumber were set out. The surveyor's fees were payable by the seller, and procedure was provided for cases in dispute.

Chapter 92 of 1851 deals with the preservation of useful birds and animals under seven sections, with Section 7 providing fines for keeping dogs accustomed to killing sheep.

Chapter 93 continues bounty payments for killing bears, loup cerviers, wildcats and wolves.

Chapter 102 deals with burning woods and marshes.

SECTION 1 Sessions to make regulations for burning woods and marshes.

SECTION 2 Limitation of prosecution.

SECTION 3 Imprisonment on conviction; when person convicted failed to pay and had no goods on which to levy.

Chapter 103 is concerned with the conveying of timber and lumber on rivers, and the removal of obstructions:

SECTION 1 Commissioners, how appointed, their jurisdiction, how defined.

SECTION 2 Powers of Commissioners.

SECTION 3 Commissioners could borrow money.

SECTION 4 Tolls to be established; their application.

SECTION 5 Accounts to be submitted annually and audited by the Sessions.

Section 6 Operation of Chapter to be registered.

Section 7 Sessions empowered to make regulations.

Section 8 Logs, timber and lumber may be brought down rivers under regulations.

Section 9 Definition of the word "river".

An Act relating to the Crown Land Department, passed on November 29, 1851, is set out under twelve sections:

Section 1 Title of Commissioner.

Section 2 Duties of Commissioner.

Section 3 Governor could modify regulations.

Section 4 Commissioner guardian of young persons landed as immigrants.

Section 5 Governor to direct surveying of lands.

Section 6 Duty of deputy surveyors.

Section 7 Price of ungranted land.

Section 8 Grants.

Section 9 When grants declared void.

Section 10 Governor could sell or release lands.

Section 11 Reservation of lands for Indians.

Section 12 Chapter 28 repealed.

Under Section 1 the Surveyor General and Commissioner of Crown Lands was hereafter to be styled Commissioner of Crown Lands. Section 10 Gave authority to the Governor-in-Council to "sell or lease any land at such price and for such tenure, times, or use, either as regards the land or timber, quarries or mines thereon, or other benefit to be derived therefrom, as may be deemed expedient." This appears to be the first time that provision is made for leasing Crown lands; but it does not seem that leases were issued until the passing of a Lease Act in 1899.

While it had no bearing on the Department of Crown Lands, it is perhaps worth mentioning that in 1853 The Game and Inland Fishery Protection Society of Nova Scotia was organized. Reputed to be the first society of its kind in what is now Canada, and the second in North America, it was never very active outside the City of Halifax. Much later it was succeeded by the People's Fish and Game Protective Association.

In 1853 John Spry Morris applied for and was granted sick leave, and W.A. Hendry was appointed Deputy Commissioner of Crown Lands at pleasure. The following year J.B. Uniacke was appointed Commissioner of Crown Lands and on March 31, 1855, a pension of £240 sterling per annum was provided for John Spry Morris.

Just prior to this, salaries had been fixed for the Crown Land Office: Commissioner, £500; first clerk, £250; additional clerks, £300; contingencies, £50. Salaries were to be current money of Nova Scotia.

No mention is made here of a Deputy Commissioner, so it is probable that at this time W.A. Hendry was designated First Clerk.

On April 18, 1856 an Act was passed for the preservation of pheasants, so one may assume that an attempt had been made to introduce pheasants to Nova Scotia at that time.

In Chapter 28 an Act to amend Chapter 92 of the Revised Statutes, "Of the Preservation of Useful Birds and Animals", was also passed on April 18, 1856. A penalty for killing moose was set at not more than £5 or less than 40 shillings and if the fine should not be paid, a jail term was provided of not more than six days or less than two days.

Following the election of the J.W. Johnston Government, James B. Uniacke lost his job as Commissioner of Crown Lands in 1857, and was replaced by Samuel P. Fairbanks, with W.A. Hendry as Deputy Commissioner.

Chapter 5 of the Acts for 1859 provides for the escheating of lands that had been forfeited to the Crown and Chapter 18 sets fees to be charged in the Crown Lands Office. The fee for every search to be £0 1s 6d and the copy of a grant to be £0 2s 6d.

In 1861, Chapter 10, page 11, an Act to invest in the Commissioner of Crown Lands the inspection of Mines, and the office of Inspector of Mines, was abolished.

Chapter 35 of the same year is an Act to prevent the destruction of the smaller kinds of birds, with killing and offering for sale prohibited.

Chapter 22 of 1862 prohibits the killing of animals valuable for their fur at certain seasons. The killing of otter, mink and "musquash" [muskrat] between May 1 and November 1 is prohibited.

Chapter 23, an Act to amend Chapter 92 of the Revised Statutes deals with the preservation of useful birds and animals and states in part:

> No person during any one year or season shall kill more than five moose or caribou, nor shall any person knowingly kill any cow moose between the first day of January and the first day of September in any year, and no person shall set traps or snares for catching moose or caribou.

During the next few years a number of Acts were passed dealing with Crown lands and the game laws, but none was of great importance. In 1870 an Act was passed for the protection of mink breeders which permitted any person to catch any number of mink for breeding purposes.

Belcher's Almanack for 1871[1] lists the following persons in the Crown Lands Department: Commissioner of Crown Lands—Samuel P. Fairbanks; Deputy Commissioner of Crown Lands—Wm. A. Hendry; Clerks—Edward Morris, Fred LeBlanc, Matt Cupbaidge, Geo. Lloyd and E.C. Fairbanks; Draughtsman—James H. Austin.

A list of Deputy Surveyors also is given.

In 1872 an annuity of $1,200 annually was provided for Samuel P. Fairbanks.

Listed as staff for the Crown Lands Department for that year are: Commissioner of Crown Lands—E.P. Flynn; Deputy Commissioner of Crown Lands—W.A. Hendry; and James H. Austin now appears as one of the Clerks.

Chapter 13 of 1874, an Act for the Preservation of Useful Birds and Animals, is set out under 13 sections.

SECTION 1 Provided a closed season on moose for three years from September 1, 1874 until September 1, 1877.

SECTION 6 Snares for moose forbidden.

SECTION 7 No beaver was to be killed from September 1, 1874 until September 1, 1877.

SECTION 11 Provided for the appointment of Commissioners or Wardens and Deputies, with their powers, duties and compensation.

SECTION 12 Justices of Peace to enforce Act — etc.

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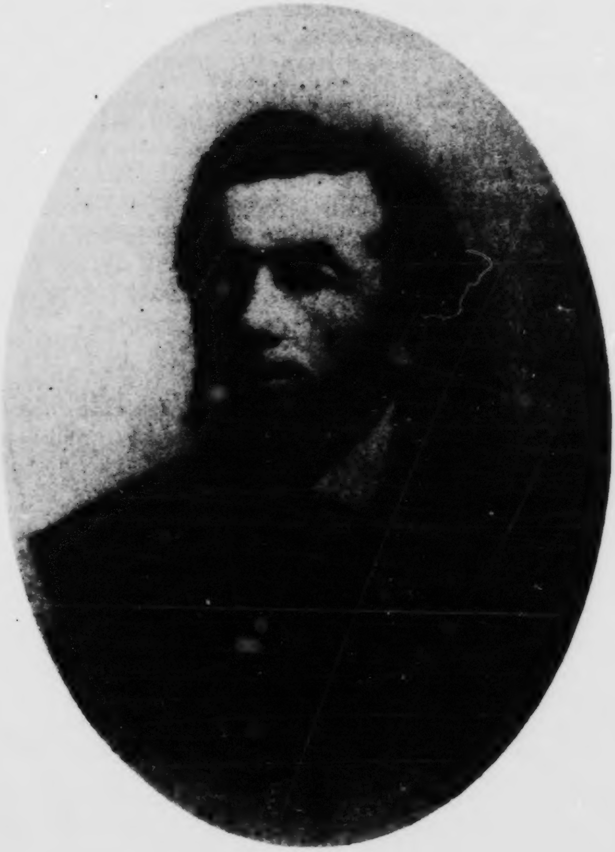
[1] *Belcher's Almanac* (Halifax: McAlpine and Barnes, 1871-72).



Alonzo J. White was Commissioner of Crown Lands in 1875.
Public Archives of Nova Scotia photo.

Belcher's Almanack for 1875[5] shows Alonzo J. White as having replaced E.P. Flynn as Commissioner of Crown Lands, with W.A. Hendry as Deputy.

Chapter 6 of the Acts of 1875 provided a number of changes in the law for the preservation of useful birds and animals. Half the penalty for an offence under this Act was to go to the Commissioner or Warden if prosecuting, and meat forfeited under the Act was to be given to the poor. There was a penalty for hunting moose or caribou with dogs, and it became lawful for any person to kill a dog found hunting moose or caribou.

Provision was made for the appointment of a Chief Game Commissioner for the whole province by the Governor-in-Council, "the Chief Game Commissioner to receive such annual sum for his services as the Governor-in-Council may determine."

Chapter 19 of 1875 authorized the Governor-in-Council to grant more than 2,000 acres for lumbering.

Chapter 3 of 1877, an Act to provide for the transfer of the duties of the Commissioner of Crown Lands to the Attorney General, had these provisions:

SECTION 1 Office of the Commissioner of Crown Lands to be abolished.

SECTION 2 Duties thereof to be discharged by Attorney General.

SECTION 3 Chapter 11 Revised Statutes amended.

SECTION 4 Section 1, Chapter 11 Revised Statutes, etc. repealed.

Apparently W.A. Hendry retired at this time, and Hon. Alonzo J. White continued as Attorney General and Commissioner of Crown Lands, with James H. Austin replacing W.A. Hendry—but as Chief Clerk, a title which he held for many years. Eventually he was appointed Deputy Commissioner.

In 1877 the game laws were again amended, this time under 21 sections, two of which are of interest here:

SECTION 3 Provided that a hunting party shall not take more than three moose and five caribou.

SECTION 18 Provided for a nonresident hunting license, [but] "officers of Her Majesty's Service in the

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[5] *Belcher's Almanac* (Halifax: McAlpine and Barnes, 1875).

> Garrison who are members of the Game and Inland Fishery Protection Society of Nova Scotia [are] exempt from license."

Chapter 5 of the Acts of 1880 was an Act to amend the law relating to Crown lands. Grants for settlement and for lumbering were to be issued under the same conditions. Initially land grants were issued to persons who were expected to build homes and clear and cultivate at least a portion of the grant. At a later date, land was granted for lumbering purposes but the cost and conditions of the grant varied.

The price of all Crown land was to be $40 per 100 acres. Where land had been occupied and improved for two years before the passing of the Act, the price shall be $20 per 100 acres.

Chapter 11 of the Acts of 1881, contains an Act in reference to Crown lands and Crown Land Surveyors:

SECTION 1 Provisions of Section 2, Chapter 5, Acts 1880 extended.

SECTION 2 Appointment of Dominion Land Surveyors as Deputy Crown Land Surveyors.

SECTION 3 Escheated land when vested in the Crown.

In 1882, Chapter 3, the price of improved Crown land was again set at $20 per 100 acres, and a salary of $1,400 per annum was provided for the Chief Clerk.

An Act for the protection of woods against fire, set out in detail under 24 sections, is found in Chapter 23 of the Acts of 1883. This Act states when fires may be set and for what purpose:

SECTION 4 Covered precautions to be taken with matches, ashes of pipes, cigars and discharge of firearms.

SECTION 5 Provided double damages for starting a fire on land not owned or for not preventing fire spreading from land that is owned.

SECTION 9 Covered precautions required when locomotives pass through woods.

SECTION 10 Duty of Engine Driver.

SECTION 20 Reads in part:

> It shall be the duty of all County Councillors, Stipendiary Magistrates, Justices of the Peace and other county officers, and the Special duty of all Deputy Surveyors and other officers of the Department of Crown Lands, and the Chief and other Game Commissioners and all Game Wardens to enforce the provisions and requirements of this Act.

Here for the first time the Department of Crown Lands is given some little authority to protect the woods from fire.

In 1887, Chapter 14, there is an Act to amend Chapter 76, Revised Statutes, Of the Preservation of Useful Birds and Animals. Game Wardens were no longer to be appointed, and 80 per cent of monies collected were to be paid over to the Game and Inland Fishery Protection Society.

Chapter 2, 1894 contains an Act to amend and consolidate the Acts relating to the preservation of useful birds and animals. The Game Act is now set out in 42 sections. The season for moose and caribou during years 1894-1897 was to be September 15 to January 15, with a bag limit of two moose and four caribou.

SECTION 34	Provided for a closed season for beaver and otter.
SECTION 35	Three-year closed season on cow moose.
SECTION 11	Deer and American elk protected.

The offices of Chief Game Commissioner and Game Commissioners continued.

In 1896, the Game Act was again amended in Chapter 4, An Act to Further and to Consolidate the Preservation of Game. The word game was defined and deer or American elk, Newfoundland hare or "jack rabbit" were protected, as were pheasant, black cock, capercailzie, ptarmigan, sharp-tailed grouse, spruce partridge, and chukar partridge. The Act again provided for the appointment of a Chief Game Commissioner for the province, and the offices of District Game Commissioners were also continued. The Game and Inland Fishery Protection Society was given authority to appoint persons to sell game licenses and it would appear that these persons also had authority to enforce the Act.

When licenses were sold, five per cent of the license fee was to go to the vendor, 80 per cent to the Game Society and 15 per cent to the Provincial Secretary.

The season for moose and caribou in Cape Breton was closed until 1899. The year 1899 saw an important change in provincial policy respecting Crown lands. Chapter 3 of the Acts of that year provided an Act respecting the leasing of timber lands. The Act was divided into seven sections:

Section 1 Instead of issuing grants as heretofore, parties applying could obtain permits.

Section 2 Such leases issued at not less than 40 cents per acre.

Section 5 Governor-in-Council authorized to grant leases.

Section 7 Governor-in-Council authorized to purchase lands.

A lease was to be for 20 years with an option of renewal, and at a price of 40 cents per acre. The lessee had the right to cut trees down to 10 inches in diameter. For an additional 10 cents per acre the diameter limit could be reduced to five inches.

Under Section 5 the Governor-in-Council was authorized and empowered to make a lease of Crown lands upon terms other than were provided in this Act, where lands proposed for lease were of inferior quality and the party proposing to lease them was prepared to spend money in development of said land, or in the erection of mills and machinery for the manufacture of pulp or other wood products.

Section 7 The Governor-in-Council is hereby authorized and empowered to obtain by purchase at a rate not exceeding 25 cents per acre any land heretofore granted for lumbering purposes.

Shortly after the passing of this Act the so-called "Big Lease" was issued covering about 600,000 acres in Inverness and Victoria counties for a period of 99 years. Under the terms of this lease the lessee was to pay to the Province an annual rental of $6,000 and to build two pulp mills, one in each county, and no unmanufactured wood was to be exported. While his name does not appear in the original lease, F.J. Barnjum was hovering behind the scenes and in the end he was to reap a handsome profit when he sold the lease to the president of the Oxford Paper Company. Under the terms

Lumber arriving at railway station, Shubenacadie, N.S. c. 1900.

Workers at a portable sawmill early in the century. Both photos courtesy of Public Archives of N.S.

of this lease the rental fee of $6,000 per year was the only money collected by the Province, since no royalty was paid when trees were cut on any of the timber leases.

While the issuance of timber leases instead of grants in fee simple was a timely change in policy, the selling of leases for a lengthy term with no stumpage payments when the timber was cut, was a short-sighted and costly blunder.

During the following decade additional timber leases were issued covering thousands of acres. These leases were seldom larger than a few hundred acres, and were for a 20-year period with an option of renewal for a further 20 years. The cost was 40 cents per acre with a 10-inch diameter limit, and 50 cents per acre with a diameter limit of 5 inches. Again no royalty was collected by the Crown when timber was cut.

During the years 1900 and 1903 there were some slight amendments to existing legislation, but nothing of great importance. In 1904, however, an Act of considerable importance was passed to amend Chapter 91, Revised Statutes 1900, entitled The Protection of Woods Against Fires. This Act is in 18 sections and Sections 5 and 11 are of particular interest:

SECTION 5 Required the employment of watchmen at portable mills, which at that time were steam mills that started many fires.

SECTION 11 Provided for the appointment of Chief Rangers for each municipality and spelled out in detail the duties of a Chief Ranger.

Each Chief Ranger received a small annual salary from the Province as fixed by order of the Governor-in-Council, and was required to submit an annual report to the Commissioner of Crown Lands on or before December 31 each year.

All firefighting costs and any expenses incurred by the Rangers were to be paid by the municipalities. To cover these costs the municipal assessors were required to levy one-quarter cent per acre on properties of 1,000 acres or more, and if the monies so raised were not sufficient, any balance was to be paid out of municipal funds. Besides his duties as fire ranger, a Chief Ranger was also required to enforce the game laws.

Also in Chapter 6 of the Acts of 1904, an amendment was made to the Crown Lands Act which increased the price of Crown land from 40 cents to 80 cents per acre, and which added the cost of survey to the total price paid for a grant. The cost of timber leases was also increased from 40 and 50 cents per acre to 80 cents and $1.00 per acre respectively, and the cost of survey was also an additional charge.

Chapter 12 of the Acts of 1905 provided further amendments to the Act for the Protection of Woods Against Fire. The Chief Ranger, in addition to his other duties, was now required to assess and to collect one-quarter cent per acre from owners of 500 acres or more. All sums so collected were to be paid to the Municipal Treasurer after deducting five per cent as remuneration.

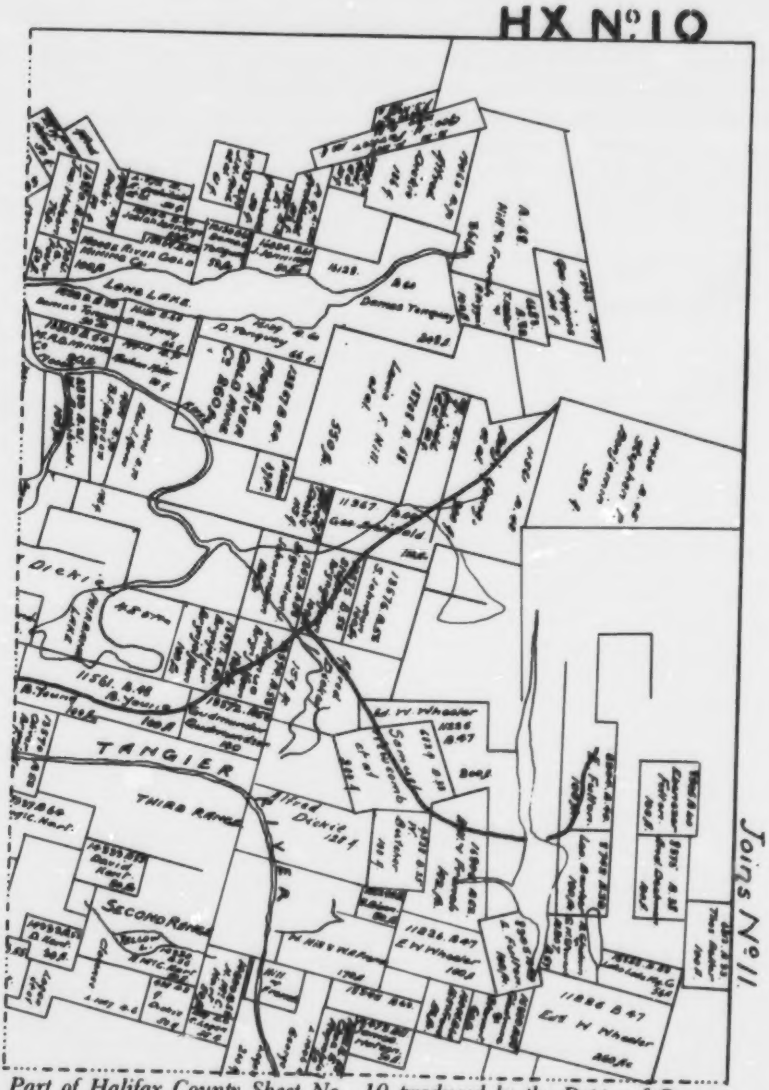
In 1907, Chapter 27 was an Act to Amend and Consolidate the Acts for the Preservation of Game. This amendment was set out in detail under 79 sections. The Act set the bag limit for moose at one animal, and the killing of moose in Cape Breton was prohibited until 1915. Caribou and deer were protected until 1910, and licensed guides were required to register in the office of the Secretary of the Game Society.

In 1908 the Game Act was again amended, this time with provision for the appointment of Game Inspectors and Game Wardens; moreover all registered guides became ex-officio Game Wardens.

In 1909 an Act was passed providing an annuity of $900 for James H. Austen, the Deputy Commissioner of Crown Lands; but it appears that he continued to hold that position for an additional three years.

Chapter 4 of the Acts of 1910 was an Act to Amend and Consolidate the Acts relating to Crown Lands. This revision was in 85 sections and retained the Attorney General as Commissioner of Crown Lands and provided for the position of Deputy Commissioner:

SECTION 12	Gave authority to the Chief Provincial Surveyor and Deputies to pass over any land when engaged in duties of office.
SECTION 18	Permitted the expropriation of land when timber has been exhausted by lumbering or fire.
SECTION 19	Provided for the conservation of timber and required that the Commissioner maintain and


HX No 10
Joins No 11
LONG LAKE
Moose River Gold Mining Co.
Damas Tanguay
TANGIER
THIRD RANGE
SECOND RANGE
Alfred Dickie
B. Young
E.W. Wheeler
Ed. W. Wheeler

Part of Halifax County Sheet No. 10 produced by the Dept. of Crown Lands in a series used by B. E. Fernow as base maps during the summers of 1909 and 1910; original scale 1/2-mile to the inch, here reduced. Source: Provincial Crown Lands Record Centre, Dartmouth, N.S.

	conserve the timber on Crown land, and to plant and cultivate trees where necessary.
Section 26	Permitted the granting of Crown lands suitable for agriculture, grazing or settlement.
Section 29	Small lots of Crown land completely surrounded by granted land could be granted or leased.
Section 42	Provided for licenses to cut timber, and Section 43 limited the period of a license to two years.
Section 59	Gave the Commissioner authority to offer Crown timber for sale at public auction.
Section 84	The export of pulpwood cut from Crown lands could be prohibited.

During the next few years a very considerable area of Crown land was granted under authority of Section 29, and it was not until the early 1920s that government policy again changed and grants of timberland were no longer issued.

The Nova Scotia Provincial Land Surveyors Act, Chapter 5, also was passed in 1910 and was set out in 25 sections.

During this period a very important undertaking was in progress that is not covered in any legislation but which had considerable bearing on the Department of Crown Lands, and, in time, on the Department of Lands and Forests. Early in 1908 members of the Lumbermen's Association of Western Nova Scotia were pressing for a survey of the forest resources of the province. In 1909 the provincial government decided to take action and approached Dr. B.E. Fernow, dean of the then newly established School of Forestry at the University of Toronto. Dr. Fernow was assisted by Dr. C.D. Howe, who was later to succeed Fernow as dean, and by Mr. J.H. White, who also, then or later, was a professor at the Toronto School of Forestry. The field work was carried out during the summers of 1909 and 1910, and the final report, *Forest Conditions of Nova Scotia*, by B.E. Fernow, was published in 1912.

At that time no adequate maps were in existence and the Crown Lands Department undertook the task of preparing a set of maps showing land grants and vacant Crown land. The so-called Forestry Sheets—prepared largely by John Thompson and probably assisted by F.A. Harrison—were the result. While they left much to be desired, they remained the only maps available for many years.

For several reasons the Fernow Report is a truly remarkable document. The actual field work, which was carried out by three men assisted by a few students for two summers at a cost of $6,000, produced a report which confirmed much of the Titus Smith report of 1801 and 1802. In turn the Fernow Report was proven to be remarkably accurate by the much more sophisticated forest inventory whose results were published in 1958 in the report entitled *Forest Resources of Nova Scotia*.

It would seem that sometime in 1912 James H. Austen retired as Deputy Commissioner of Crown Lands and was succeeded by J.B. Whitman. J.B. Whitman was a prominent lumberman from Annapolis County and for a number of years had served as Chief Ranger for that municipality. In 1909 he had been given the title of Provincial Forest Ranger and had assisted in gathering material for the Fernow Report.

During 1913 and 1914 some amendments were made to both the Crown Land and Game Acts, but nothing of any great importance.

In 1915 J.B. Whitman was replaced as Deputy Commissioner of Crown Lands by F.A. Harrison. Mr. Harrison was a land surveyor from Cumberland County who had been employed in the Crown Land's Office for some years prior to the retirement of J.H. Austen. During Harrison's first year as Deputy Commissioner, forest fire statistics were compiled and published in the Annual Report for that year.

At that time timberlands outside the boundaries of school sections paid no taxes except for one-quarter cent per acre fire tax; but this situation was to change in 1917 with the passing of Chapter 6, An Act Respecting Land Taxation. This Act provided that every occupant of 500 acres and upwards should pay a tax of one per cent of the assessed value of the land. Section 7 of the Act authorized the Governor-in-Council to appoint one or more persons to be called Provincial Land Assessors, and the Assessors were to fix the value of the land at any such sum greater or less than $1.00 per acre. The taxes were to be paid to the Municipal Clerk, and then in turn to the Provincial Treasurer.

Chapter 35 of the Acts of 1918 amends the Crown Lands Act by providing that all minerals on Crown Grants, excepting only limestone, plaster, and building materials, be reserved to the Crown. Chapter 52 of the Acts of the same year amends the Land Tax Act. Henceforth the taxes imposed by this Act were to be payable at the office of the Commissioner, and the Commissioner was defined to include the Deputy Commissioner of Crown Lands.

In 1921, Chapter 2 of An Act to Amend and Consolidate the Acts for the Preservation of Game and the Protection of Woods Against Fires made some important changes and prepared the way for a new Department of Forests and Game. This Act consisted of 132 sections and was the forerunner of the Lands and Forests Act:

SECTION 1 Short Title. The Forests and Game Act.

SECTION 2 Divisions:

Part I Organization and Control
Part II Forests
Part III Game
Part IV Fish
Part V General

Part I provided that the Governor-in-Council should appoint a person to be Commissioner of Forests and Game and that his duties should be under the direction of the Attorney General. The duties of the Commissioner were:

(a) to conserve and protect the forest from fire;
(b) to protect, preserve and propagate game and game fish;
(c) to disseminate information regarding forest and game conservation, and the laws of the province relating to the same; and
(d) to attend to the enforcement and carrying out of the provisions of the Act.

Subject to the approval of the Attorney General, the Commissioner was authorized to appoint a secretary and such other officers, clerks and assistants as were required.

J.A. Knight, K.C., who for a number of years had been Chief of the three-man Game Commission, was appointed Commissioner. The fire rangers now reported to the Commissioner of Forests and Game, but the municipalities still paid all firefighting costs. Mr. Knight engaged a small office staff and several game and fur inspectors, including E.P. Buchanan and W.E. Chandler.

Up to this time there probably was no equipment in Nova Scotia for forest protection other than buckets and shovels, but an amendment to the Forests and Game Act in 1922 provided authority to the municipalities to purchase firefighting equipment and erect fire towers. Over the next few years some municipalities did buy motor pumps and other equipment, and several companies, notably Hollingsworth and Whitney, Oxford Paper Company, A.P.W. Pulp and Paper Company, and Nova Scotia Timberlands, purchased motor pumps and erected fire towers. The revenue to support this new department came largely from the sale of licenses and royalties on fur.

The Annual Report for the fiscal year ending September 30, 1924, shows the following revenue and expenditures:

Revenue	
Sale of Licenses	$19,965.90
Sale of Permits	430.00
Royalties on Fur Skins	5,977.84
Fines and Forfeitures	1,877.56
Refunds and Exchanges	130.19
	$28,381.49

Expenditures	
Inspectors and Warden	
Service and Expenses	$10,554.04
Chief Forest Rangers Salaries	3,050.00
Printing and Stationery	1,894.02
Counsel and Solicitor Fees	257.50
Magistrate, Constable and Witness Fees	30.40
Travelling and Sundry Expenses	728.59
Office Furniture and Fittings	322.03
Postage and Box Rent	821.22
Advertising and Films	708.49
Miscellaneous Expenses	379.86
Salaries	6,680.00
Telephone and Telegrams	310.89
	$25,737.04
Surplus	$2,544.45

For the same period the revenue and expenditures for the Department of Crown Lands were:

Revenue	
Receipts for Crown Lands	$21,926.22
Searches	798.57
	$21,926.22
Expenditures	
Salaries	$5,660.00
Surveys	234.25
Refunds	450.40
Postage, Telegrams & Telephone	264.51
Printing, Books & Stationery	342.65
Newspapers	31.00
Plans	205.13
Miscellaneous	605.46
	$7,793.40
Surplus	$14,132.82

A Provincial Election during the summer of 1925 resulted in the defeat of the Ernest Howard Armstrong Government, and a Conservative Government was elected under Premier Edgar Nelson Rhodes with John C.D. Douglas as Attorney General and Commissioner of Crown Lands.

Shortly afterwards, following a common practice in those pre-Civil Service days, the entire staff of the Department of Forests and Game was dismissed, and F.A. Harrison, the Deputy Commissioner of Crown Lands, was appointed Acting Commissioner of Forests and Game.

A New Department
The Early Years (1926-1929)

On March 19, 1926, legislation was passed entitled The Lands and Forests Act, which merged the Department of Crown Lands with the Department of Forests and Game to form the Department of Lands and Forests.
This Act reads in part as follows:

TITLE 1. This Chapter may be cited as the Lands and Forests Act.

2. (1) The Attorney General for the time being shall be Minister of Lands and Forests.
3. The Minister of Lands and Forests shall have under his supervision, direction and control Crown lands:
   (a) The Management, lease, sale or other disposition of Crown lands.
   (b) The surveying and recording of all forests and wild lands.
   (c) The conservation and protection of all forests and timber lands, whether the same are Crown lands or are privately owned.
   (d) The protection, preservation and propagation of game and game fish.
4. (1) To assist the Minister and under his direction perform these duties the Governor-in-Council shall appoint a Chief Forester who shall hold office during pleasure and shall be paid such salary as the Governor-in-Council determines.

(2) The duties of the Chief Forester shall be:

  (a) To be in charge of all Crown land maps, including field notes and plans, and to see that they are kept up to date by plotting new surveys thereon. When sufficient data has been obtained he shall prepare a set of proper cadastral plans of the Province.
  (b) As Chief of the Forest Ranger Service, to conserve the forests and protect them from fire.
  (c) To inspect the Crown lands, and guard them against destruction or damage by trespassers.
  (d) With respect to all leased Crown lands, to see that all the regulations on the lease are performed.
  (e) To be Chief Scaler, and as such to supervise the scaling of the timber cut on such leased Crown lands.
  (f) As Chief Provincial Surveyor to survey all Crown lands and estimate the amount and value of timber thereon. He shall supervise the surveys made by the Deputy Surveyors and enforce the regulations of the Nova Scotia Provincial Land Surveyors Act.
  (g) To disseminate information regarding forest and game conservation including the laws of the Province relating to the same.
  (h) To further reforestation and scientific forestry.
  (i) To make an annual report in writing to the Minister on the 30th day of September covering all his duties and the work performed by him therein.
  (j) To enforce and carry out the provisions of the Chapter.

5. This Chapter shall be divided into three parts:
   Part I Crown Lands. Section 6-84
   Part II Forests. Sections 85-114
   Part III Game. Sections 115-207

In August 1926 J.C. Douglas resigned and W.L. Hall became Attorney General and Minister of Lands and Forests, and sometime during 1926 F.A. Harrison was dismissed and Otto Schierbeck was appointed Chief Forester.

Schierbeck was a Danish forester who had been employed by Price Brothers in Quebec. He had won a $5,000 prize offered by F.J. Barnjum for the best treatise on the spruce budworm and Barnjum engaged him and brought him to Nova Scotia to survey and cruise the MacLeod Pulp Company lands which Barnjum owned. In the 1925 election Barnjum had been a successful candidate in support of E.N. Rhodes and apparently Schierbeck's appointment was largely due to his influence. Schierbeck had a stormy and controversial career in Nova Scotia, but he had the energy and self-assurance to break new ground and get things done.

The Annual Report for 1926 shows that the province was divided into 10 Ranger districts with a total of 10 Chief Rangers, 61 Sub-Rangers and 560 Voluntary Rangers.

The Chief Rangers were full-time employees who were paid $100 per month; Sub-Rangers were employed only during the fire season and received $75 per month during that period; Voluntary Rangers were paid only when fighting fire.

During 1926 a Provincial Forest Nursery was established at Lawrencetown, Annapolis County. It was managed by Axel M.O. Gold, another Danish forester who had served overseas in the Canadian Forestry Corps during World War I and who had purchased a fruit farm at Lawrencetown after the war.

In the same year some 3,000 acres of land near Waverley, Halifax County, were set aside for the Boy Scouts and in time this area was enlarged to become the Waverley Game Sanctuary.

Firefighting costs were still paid by the municipalities in 1926, but the following year the Province relieved the municipalities of that burden.

By an Order-in-Council dated October 29, 1927, Tobeatic Park was established as a Game Sanctuary and an Order-in-Council dated August 10, 1928, added Liscomb Park.

The boundaries of the Game Sanctuaries were established and marked by Clarence Mason, a colourful character well known to the sporting fraternity of this province, who at that time was employed as Inspector of Game Sanctuaries.

In the Fall of 1927 there was a short open season on cow moose with a special license issued to farmers. This special season may have been popular with a few, but the majority of sportsmen violently opposed it. Apparently it was to please some of his constituents that the Minister of Lands

In 1961 Nova Scotia hosted the Northeastern Wildlife Conference —a first for the province and a boost for our wildlife management efforts. Clarence Mason (left) confers with Harrison F. Lewis, then chief of the Canadian Wildlife Service.

and Forests had fathered the necessary legislation permitting this special season, but when it became a hot political issue Schierbeck was asked to defend the action.

Possibly a native Nova Scotian would have let the Minister defend himself, but Schierbeck wrote a number of articles in defence of this special season contending that moose were monogamous, that the ratio of cows to bulls was out of balance and that as a result many cows were barren. He argued further that shooting a number of cows would bring the herd back in balance, and that in the long run this would benefit the moose. As a result of the articles the wrath of the sportsmen was turned from the Minister and directed at Schierbeck.

About this time Schierbeck also had his Rangers carry out a moose census—a routine chore of game managers today, but in the Nova Scotia of the 1920s "Counting the Moose" was considered idiotic. So ridicule was added to the wrath already heaped on Schierbeck. But through it all he carried on, and the province and the Department of Lands and Forests are in his debt for many of the programmes he initiated.

A big thickset man with a round pleasant face, Schierbeck was colourful in both his speech and his actions. While fluent in English he had difficulty pronouncing "th" and "j", and had the habit of beginning a sentence with "Yesus du Yesus". When in company he would sometimes remain aloof, taking no part in the conversation, and then suddenly make a remark that proved he had been listening.

After the establishment of the Waverley Game Sanctuary a few men from Halifax made a practice of meeting at the Warden's cabin during summer weekends. One fine Sunday evening the usual little group was sitting on the verandah talking, while Schierbeck sat off to one side reading, and taking no part in the conversation. A prominent man from Halifax was holding forth on morals and self-control. He held himself up as a moral man in full control of his passions, and to emphasize his point he declared that when he got married he spent an entire three-week honeymoon without consummating his marriage. At the conclusion of this recitation Schierbeck looked up from his book and said, "Yesus du Yesus, how yat poor woman must haff suffered."

In time Schierbeck built up a competent staff which included John Condon, an engineer in charge of Crown land plans and records; Brian Alexander and David Hudson, student foresters and later graduates, who along with Hiram Thomas and others carried out cruises on Crown lands; and J.D. Lockwood and H.L. Fenerty, who were employed in the office and as fire inspectors and on game patrols. already mentioned, Clarence Mason was Inspector of Game Sanctuaries. Three or possibly four stenographers were employed in the Halifax office, including Marion Jensen and Doris Jollymore.

In time the Ranger districts were reduced from 10 to 6. The Annual Report for 1929 lists the districts and Chief Rangers as follows:

DISTRICT I.	Digby, Yarmouth, Shelburne Chief Ranger—D. Trask
DISTRICT II.	Annapolis, Queens, Kings, Lunenburg Chief Ranger—W.O. Bligh
DISTRICT III.	Halifax, Hants, part of Colchester Chief Ranger—G.S. Dickey
DISTRICT IV.	Cumberland, part of Colchester, part of Pictou Chief Ranger—W.F. Beatty
DISTRICT V.	Guysboro, Antigonish, part of Pictou Chief Ranger—W.B. Fraser
DISTRICT VI.	Cape Breton Island Chief Ranger—C.H. Pertus

By this time a considerable amount of firefighting equipment had been purchased and a large number of wooden fire towers had been built.

An attempt was made to train the Chief Rangers as land surveyors. This did not prove successful, but a start was made on re-establishing county lines, and sizeable areas of Crown land were cruised.

At this time the promoters of what was to become the Mersey Paper Company were negotiating with the Province for a lease of Crown land with one million cords of pulpwood. The Annual Report for 1928 shows the area of Crown land to be 2,319,378 acres, with 893,130 acres leased and 1,426,248 acres vacant. The Province agreed to issue a lease and the company was permitted to select the land needed, but due to the interests of existing companies the selections were limited to the Eastern Mainland and to Cape Breton.

Under the terms of the agreement, the stumpage rate for the first 10 years was set at $1.00 per cord, increasing to $1.50 per cord for a second 10-year period, and $2.00 per cord for a third period of 10 years. The total volume of wood to be cut in any one year was not to exceed 30,000 cords; but this restriction proved quite superfluous since the company operations on the leased lands never approached that figure.

The Department's revenue and expenditure for 1929 were:

Revenue	
Crown Lands	$ 30,013.46
Game	34,630.33
Fire Tax & Fires	27,181.86
Provincial Land Tax	90,944.17
	$182,769.82

Expenditure	
Crown Lands	$ 18,757.06
Game	44,798.03
Fire Tax & Fires	75,495.62
Provincial Land Tax	514.03
Reforestation	5,742.81
	$145,307.55

The Thirties

In 1930 W.L. Hall was appointed a Judge of the Supreme Court of Nova Scotia, and was succeeded by John Doull as Attorney General and Minister of Lands and Forests.

In 1931 the Provincial Forest Nursery supplied 443,300 trees for outplanting and at the end of the year the trees in the seed and transplant beds totalled 1,411,350 conifers and 207,400 deciduous trees. Some of the latter were ornamentals to be used in an attempt to beautify the rural school grounds. The total cost of operating the nursery that year was as follows:

Salaries	$1,149.96
Wages	4,457.52
Miscellaneous and Seeds	2,121.48
Maintenance of Equipment	724.73
Travelling	263.18
Expressage	340.90
	$9,057.77

By 1932 the Mersey Paper Company had selected 127,507 acres of Crown land and had completed the boundary survey of 52,650 acres. A cruise of the selected area by the Crown and by the company resulted in a disagreement. Schierbeck contended that the leased lands supported a volume of 800,000 cords, while Colonel Jones of the company maintained that the volume amounted to only 500,000 cords.

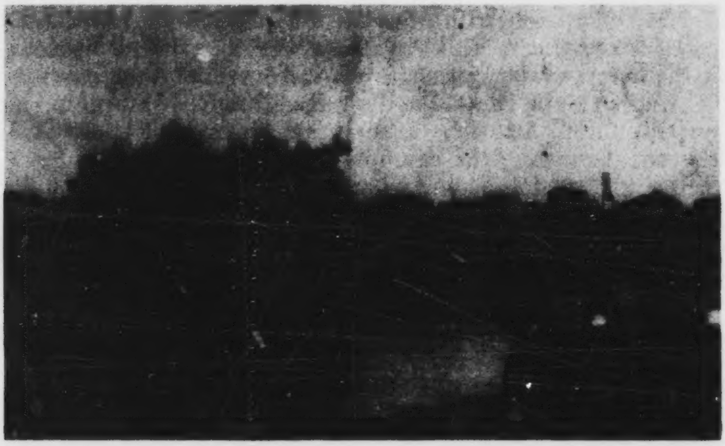
The argument was never settled, because over a period of years the company cut only a little more than 100,000 cords and the black-headed budworm and high winds harvested much of the remainder. This dispute did nothing to enhance Schierbeck's waning popularity, and was probably a factor in his eventual downfall.

About this time Brian Alexander left the employ of the Department of Lands and Forests to manage the MacLeod Pulp Company lands, later becoming forester with Minas Basin Pulp and Power Company where he had a long and distinguished career.

By the beginning of the 1930s Nova Scotia, in common with the rest of the world, was in the depths of a depression. The forest industries were, if possible, in worse condition than others. In 1933 Schierbeck was sent to England to find markets for Nova Scotia lumber. At that time the Russians were shipping substantial quantities of pulpwood to St. Lawrence ports and underselling the domestic product. When Schierbeck arrived in England the Canadian High Commissioner Howard Fergusson, a former Premier of Ontario, had an article ready for publication describing the depressed condition in Canada. Apparently the article depicted starving people and deserted villages resulting from the Russian wood sales. Schierbeck was persuaded to let the article appear over his signature—with the scenes of desolation moved from the St. Lawrence area to Nova Scotia.

Coinciding with this event there was a "palace revolt" in the Department of Lands and Forests, and a group of Rangers met in Halifax and demanded Schierbeck's dismissal. A Provincial Election was in the offing, Schierbeck's popularity in the province was at a low ebb and it would seem that the Government decided to offer him as a public sacrifice. In any case he was hastily recalled to Nova Scotia and dismissed, ostensibly for permitting his name to appear in the Fergusson article. Hiram Thomas was appointed Acting Chief Forester and held that position for several months.

Shortly after these events a Provincial Election was announced. Since there was no Civil Service at that time many members of the Lands and Forests staff, along with other government employees, took an active part in the



(Top) Testing a new Johnson-Tremblay fire pump in 1934 at Steele's Pond near Halifax's Point Pleasant Park. Holding the hose is Ted Buchanan, assistant provincial fire inspector, while Wilf Creighton talks with the demonstrator. (Below) An unknown firefighter watches over a Wajax pump supplying water to a crew working on the Purcell's Cove fire in August, 1934.

election campaign, with work carried on openly in the Lands and Forest offices. This election in the fall of 1933 resulted in the defeat of the Harrington Government and the election of Angus L. MacDonald as Premier. Josiah H. MacQuarrie was appointed Attorney General and Minister of Lands and Forests. Following the example set in 1925, most members of the staff of Lands and Forests were dismissed, and F.A. Harrison was recalled to head up his old Department. Only three members of the old staff remained—two stenographers and David W. Hudson, a forester. A drastic reorganization of the Department followed, but unfortunately many of the changes were for the worse.

In place of six Ranger Districts with six Chief Rangers the province was divided into 20 districts with 20 Chief Rangers and 58 Sub-Rangers, as follows:

DISTRICT 1		
Lunenburg County	Chief Forest Ranger	J.E.R. March
	Sub-Rangers	Stanley Jefferson Everett Sims Harold Meister
DISTRICT 2		
Queens County	Chief Forest Ranger	George Wile
	Sub-Rangers	Lawrence Hupman George Fisher Claude Morgan
DISTRICT 3		
Shelburne County	Chief Forest Ranger	George Swansburg
	Sub-Rangers	Edgar Harris Percy Harris Uriah Scott
DISTRICT 4		
Yarmouth County	Chief Forest Ranger	Clarence C. Burrell
	Sub-Rangers	John D. Armstrong Alfred V. Hamilton Roy Frost
DISTRICT 5		
Digby County	Chief Forest Ranger	Harry W.B. Warner
	Sub-Rangers	Alfred V. Banks Clarence Blin Leo Thibault

DISTRICT 6 Annapolis County	Chief Forest Ranger	W.C.L. Dargie
	Sub-Rangers	Joseph Mailman Reginald Hannam Solomon Wentzel
DISTRICT 7 Kings County	Chief Forest Ranger	Albert Corcoran
	Sub-Rangers	Rupert Long George West Charles Watsonc
DISTRICT 8 Hants County	Chief Forest Ranger	E.D. Hennessey
	Sub-Rangers	James Sterling Freeman R. Benedict
DISTRICT 9 Cumberland County	Chief Forest Ranger	Louis Ripley
	Sub-Rangers	John R. Colburn Richard Bird Norman Trueman David Thompson W.B. McWhirter
DISTRICT 10 Colchester County	Chief Forest Ranger	Raymond T. McCabe
	Sub-Rangers	D.M. Langille Firman Barnes Arthur Stevens
DISTRICT 11 Pictou County	Chief Forest Ranger	H.F. Chabassol
	Sub-Rangers	Angus Henderson Lawrence James Alex L. MacGillivray
DISTRICT 12 Antigonish County	Chief Forest Ranger	George W. McChesney
	Sub-Rangers	Dan J. McIsaac Colin D. MacDonald Dan A. MacDonald
DISTRICT 13 Inverness County	Chief Forest Ranger	Dan N. McLennan
	Sub-Rangers	John W. Roach Thomas MacDonald Dan O'C. Doyle

DISTRICT 14 Victoria County	Chief Forest Ranger	Philip Matheson
	Sub-Rangers	William Winters Dan D. MacRae Murdock J. MacDonald
DISTRICT 15 Cape Breton County	Chief Forest Ranger	Michael Woodfine
	Sub-Rangers	William McVicar Martin J. McPherson Harold M. Hackett
DISTRICT 16 Richmond County	Chief Forest Ranger	Albert Desire Samson
	Sub-Rangers	William Urquhart Onesime Martell William Fred Fougere
DISTRICT 17 Municipality of Guysborough	Chief Forest Ranger	C.W. Taylor
	Sub-Rangers	Edmund Hayden Norman Hudson
DISTRICT 18 Municipality of St. Mary's	Chief Forest Ranger	Fisher Archibald
	Sub-Rangers	Archibald Hingley John Cruikshanks
DISTRICT 19 Electoral District of Halifax East	Chief Forest Ranger	William Day
	Sub-Rangers	Eugene Bellefontaine H.A. Siteman
DISTRICT 20 Electoral District of Halifax West	Chief Forest Ranger	Warren White
	Sub-Rangers	Emerson Barrett Charles Cornelius

In 1934 the Lands and Forests Act was revised, but in many respects the new Act did not improve the original Act of 1926. The position of Chief Forester was abolished and the position of Provincial Forester was established. While the Chief Forester had been head of the Department with his duties listed in detail, the Provincial Forester was not head of the Department and he had no set duties or responsibilities.

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In May of 1934, after an absence of eight years, I returned to Nova Scotia and was appointed Provincial Forester. Over the next few years I learned by trial and error what my position in the Department was supposed to be. At that time the Department was small, understaffed and poorly paid. But there was, for the most part, a friendly spirit of co-operation that helped to overcome many difficulties.

In the Halifax office F.A. Harrison, with a salary of $2,700 per annum and the title of Chief Clerk, was head of the Department under J.H. MacQuarrie, Attorney General and Minister of Lands and Forests. As Provincial Forester with no set duties I was paid $2,000 per annum. R.J. Milgate, an experienced and very competent land surveyor, was in charge of surveys, maps and Crown land records with an annual salary of $1,800. Alexander M. "Fergie" Ferguson, Accountant, and E.P. Buchanan, Game and Fur Inspector, were each paid $1,400 per annum and David Hudson, a graduate Forester, got $1,200. Three stenographers, Alice Phelan, Doris Jollymore and Jessie Ross, were paid about $800 a year. They were joined a year later by Mary Murphy. Chief Rangers and Game Sanctuary Wardens were paid $58 per month, and Sub-Rangers received $12.50 per month plus a small hourly wage while actually fighting fire.

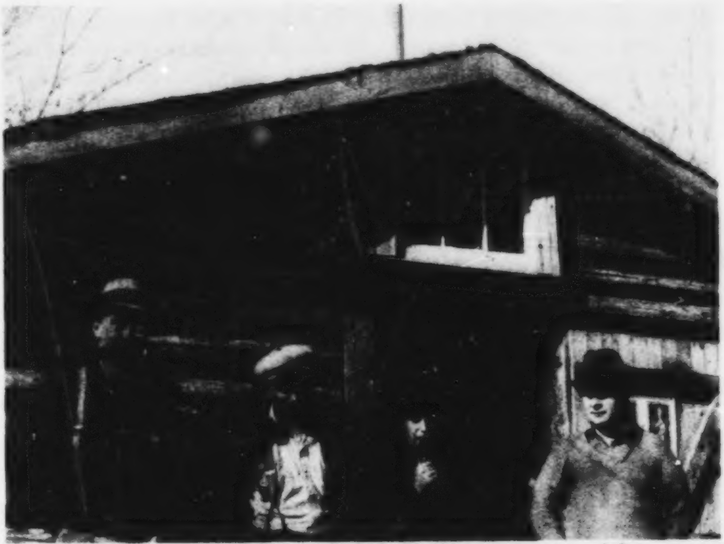
Axel Gold, the Manager of the Provincial Forest Nursery, had been dismissed in 1933; but the nursery was located on his land and in time he entered into a contract with the Department to produce 100,000 2/2 [two years in seedbed, two in transplant = four years old] spruce and pine for $3,000 per annum.

At that time the Department of Lands and Forests was responsible for the administration of Crown lands, for protecting all forest land (private as well as public) from fire, for enforcing the game laws and managing the Tobeatic, Liscomb and Waverley Game Sanctuaries.

With a few notable exceptions most of the new men were experienced woodsmen and quite capable. However, several were past three score and ten, one was 80, and another just wasn't suitable for the job. All had been recommended by their local MLAs and when complaints were received about one man, the Minister asked the MLA why he had given the man a recommendation. The MLA replied, "Well, he wanted to be road foreman, and I knew he was no damned good so I made him fire ranger."

Firefighting equipment at that time consisted of about 25 portable motor pumps in working order, less than 1,000 feet of hose per pump, a few hundred back tanks and a few buckets and shovels. It was customary at each large fire to buy buckets and shovels from local stores, and during and after each fire most of these were carried home by the volunteer firefighters. Volunteers were paid 18 3/4 cents per hour for fighting fire, which gave $1.50 for a eight-hour day. Meals of a sort were provided, consisting mainly of bread, butter, tea, sugar, jam, bully beef and bologna. During the depression years some men welcomed a fire in order to earn this pittance and to obtain food, some of which was often carried home along with the pails and shovels.

Up to this time there had been no survey of the Crown lands except for those areas which had been leased. The so-called Forestry Sheets which had been prepared for the Fernow Report showed areas supposed to be vacant which in some cases had been occupied for long periods. Ralph S. Johnson, Chief Forester with Mersey Paper Company, found this to be particularly true in Cape Breton when the company carried out surveys of the selected areas there under the



F. A. Harrison (far right) and Ted Buchanan (center right) on an inspection trip in October 1935. Sanctuary Wardens Jewers (center left) and McIntosh pose with them outside the cabin.

terms of the Mersey Lease. It was therefore imperative to start a systematic survey of the Crown lands in order to determine the actual area and to protect them from the trespass and plundering then common in many counties.

During the summer of 1934 a small survey crew led by V.P. Harrison, a younger brother of F.A. Harrison, moved up the East River Sheet Harbour to commence this work. A crew of local men had been hired, including Markie Dean, a woods cook of ready wit and local fame.

The first night only one tent was pitched, and the whole crew—axeman, chainmen, cook, party chief and Provincial Forester—bedded down to get some sleep. One of the chainmen was a champion snorer and sleep for the others was impossible. Finally one of the axemen asked, "What makes a man snore anyway?" Someone using lumberjack terms expounded the theory that when a man lies on his back a certain part of him hangs down, covering an opening and stopping the draught.

A few days later Crown Post #1 was set just north and east of the junction of the Twelve and Fifteen Mile streams.

During that summer, axemen and chainmen were paid $1.50 per day (food and lodging included); and the cook $50 per month. Survey costs that summer averaged about $18 dollars per mile, a figure which seems quite unbelievable today.

Before the start of the survey it was thought that overrun in the grants and long-time occupation of ungranted land would drastically reduce the areas belonging to the Crown. While this was found to be true in some counties, it was not the case in Halifax County—nor indeed on most of the Mainland, where, in spite of a fairly consistent overrun in grant acreages, there was actually more vacant Crown land than had been anticipated. Furthermore, while much of the vacant land had been plundered and burned it was rapidly restocking, and considerable areas had timber of merchantable size.

As soon as the boundary line survey had progressed far enough a timber cruise was started. For this purpose aerial photographs were obtained from the Royal Canadian Air Force in Ottawa. These were seven- by nine-inch photos at a scale of about 1,320 feet to the inch.

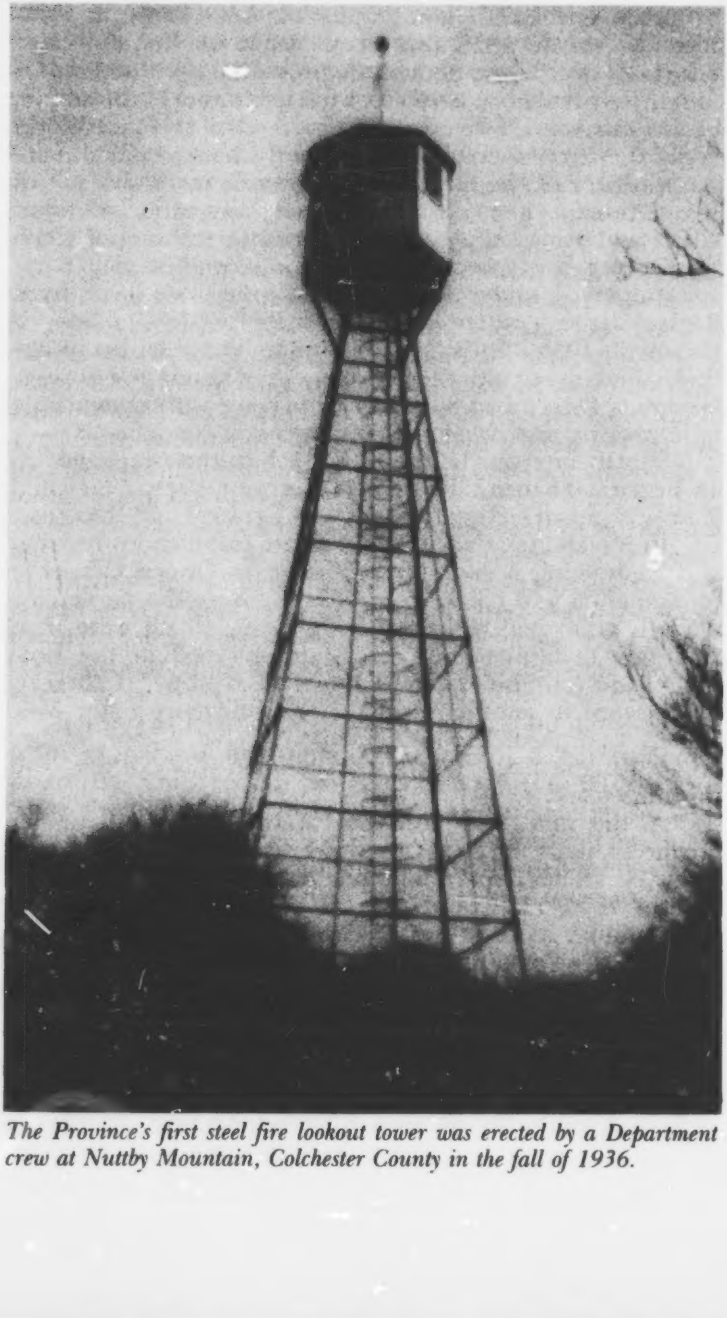
Although aerial photographs had been taken in Nova Scotia as early as 1919, this was probably the first time they were used by a department of the provincial government. Of course they had been used from the beginning by Dominion Land Surveyors. Two Nova Scotians—Dan Owen, a World War I flier from Annapolis Royal, and Charles F. Whitman, an ex-officer of the Canadian Forestry Corps and a son of J.B. Whitman—had carried out a forest survey in Labrador, taking and using aerial photographs in the summer of 1919.

During the summer of 1935 a second survey party was employed under J.E.R. March, a land surveyor from Bridgewater appointed Chief Forest Ranger for Lunenburg County in 1933. "Rusty" March was to have a long and distinguished career with the Department of Lands and Forests, becoming Director of Surveys and playing a prominent role in improving and developing surveying in Nova Scotia.

Shortly afterwards Joseph F. Archibald was engaged as an instrument man. In time Joe became Party Chief and later was put in charge of maps and Crown Land Records.

In the Halifax Office R.J. Milgate commenced revising and completing a consolidated Index of Crown Grants, a monumental and painstaking task. Because the particulars of each grant had to be typed on cards, which were then arranged in alphabetical order and retyped in the final index, the job also required hours of typing. If there is any reward in another world, Doris Jollymore (later Mrs. Robert Campbell) should someday receive a jewel in her crown for the many hours she spent on this exacting and tiresome work.

At this time, with little exact knowledge of our timber resources, fears were expressed over the future of the forest industry. The Department felt that some positive action had to be taken. Sizable areas of burned and cut-over woodland lay more or less derelict. F.A. Harrison suggested that the Crown purchase them to protect and manage so that in time there would be sufficient public land to stabilize and guarantee future supplies of timber. The government was apathetic to the proposal, and the public was either uninterested or hostile. But J.H. MacQuarrie, Attorney General and Minister of Lands and Forests, lent his support and the Department was permitted to buy land—provided it did not cost more than 25 cents per acre.



The Province's first steel fire lookout tower was erected by a Department crew at Nuttby Mountain, Colchester County in the fall of 1936.

In 1936 some 20,000 acres in Cumberland County were offered for sale at 30 cents per acre. At first the government refused to pay that price. However, in the end the Department was allowed to make the purchase, and a subsequent survey showed that due to overrun in the grants the actual cost was 19 cents per acre. This land became the nucleus of the Chignecto Game Sanctuary, established by Order-in-Council in 1937. Since then numerous purchases there have extended the public holdings so that nearly all land in the Game Sanctuary belongs to the Crown.

In 1935 the Department received reports of a trespass on Crown land in Guysborough County. I was sent to investigate. It soon became apparent that pulpwood was being cut from a number of camps over an extensive area, and by the time the operations were stopped, in excess of 20,000 cords had been cut. The president of the company involved was a Minister-without-Portfolio in the Provincial Cabinet and his involvement was to become a hot political issue in the Provincial Election of 1937.

While this was by far the biggest trespass on Crown land, it was not the only one; dozens of smaller trespasses were in progress. But because this trespass was stopped, and money collected, and the whole matter given so much prominence in the press, it became relatively easy to deal with the others. Trespass on Crown land still remained a problem, but on a much smaller scale, and as more and more Crown boundaries were clearly marked by the survey parties it became even less important.

However, fire protection continued to demand a great deal of effort and a relatively large portion of Department expenditure. Additional firefighting equipment was purchased as fast as the small budget permitted. Because many of the wooden fire towers now needed replacement, it was decided to erect a smaller number of steel towers on some of the higher points in the province. A number of triangulation stations established by the Geodetic Survey of Canada were examined and found to be ideal for the purpose.

The first of this new network of towers was erected at Nuttby, Colchester County in 1936, to be followed the next year by towers at Barr Settlement, Hants County; Blue Mountain, Pictou County; and Sugar Loaf, Cumberland

County. Over the years additional towers were built, but in time aircraft became an even more important factor in locating, patrolling and eventually fighting fires. While towers and aircraft are useful and necessary, in Nova Scotia the first report of many fires comes from private citizens, and an alert and concerned public should always remain an important part of our system of forest protection.

In 1926 the policy regarding disposal of Crown timber had been changed, and except for cases involving the expenditure of large sums for the establishment of new mills, long-term leases were to be replaced by cutting licenses valid for one year with an option of yearly renewal. The cost of a license was to be 40 cents per acre payable in advance, with stumpage at $1.00 per cord and $2.00 per thousand F.B.M. All wood cut was to be manufactured in the province and the cost of survey was to be borne by the licensee.

In 1933 and 1934, in an attempt to relieve unemployment, licenses were issued for 60 cents per cord and $1.20 per thousand board feet; but very soon the usual rates were $1.50 per cord and $3.00 per thousand board feet.

At that time it was common for an operator to apply for a license, pay a deposit of $25 and receive a license without the land being examined to determine if the trees should be cut. At the conclusion of the operation, the licensee was supposed to make a sworn statement showing the volume of wood cut and then make final payment. This proved to be a very unsatisfactory system, and obtaining a final settlement was often impossible.

In time, as the Crown lands were surveyed and cruised, timber that was mature was offered for sale at public tender and sold to the highest bidder. In most cases payment in advance by certified cheque was required. For larger parcels where the operation might require more than one year, a partial payment was accepted, with additional payments collected as cutting progressed. Since many of the timber leases were still in force, they required periodic inspections to ensure that cutting limits were observed. In earlier years, when the timber market required large trees, this had posed no problem. But on pulpwood operations clearcutting had become common, and in a few cases drastic action had to be taken to enforce the diameter limits.

Wishart Robertson (left) from Shelburne County (afterwards a Senator), with a British railway official assessing possible timber supplies at the head of Porter's Lake in 1934. This red spruce is about thirty inches in diameter, breast height.

In 1934 the lumbermen in Nova Scotia had met in Halifax and formed the Nova Scotia Forest Products Association. Shortly afterwards the officers of this association began meeting with their counterparts in New Brunswick and Quebec. Joint meetings were held in Halifax, Saint John and Quebec City, which were attended by J.H. MacQuarrie and the Provincial Forester. At these meetings the Minister became quite friendly with many of the leading lumbermen, particularly C.J. Hawkins.

On many occasions the Minister sought Mr. Hawkins' advice, and they had frequent discussions regarding Crown stumpage. Both were opposed to selling Crown stumpage at give-away prices, which they considered to be short-sighted and unfair to the private woodland owner. Crown stumpage prices in Nova Scotia at that time were considerably less than in New Brunswick, and pulpwood buyers were paying one price in New Brunswick for pulpwood piled at roadside, and dropping the price at least $5 per cord when they crossed the provincial boundary into Nova Scotia.

The summer of 1937 was notable for several reasons. There was a hard-fought Provincial Election with the opposition calling the Government the "Woodpecker Government" because of the trespass in Guysboro County. D.W. Hudson left the employ of the Department and went to work for Fraser Companies in New Brunswick. Owen Barr joined the Department that summer as a fire tower watchman. He later became Fire Equipment Mechanic, and in time was put in charge of the fire equipment depot at Shubenacadie.

Robert H. Burgess, later to be Provincial Forester and Deputy Minister, worked as a student tree-planter under Stewart MacDonald, a young forester who a few years later was to join the Royal Canadian Air Force; he was lost in action, presumably over Berlin. F.A. Harrison signed as Chief Clerk for the last time, and in the Annual Report for 1938 signed as Director. In the Halifax Office R.J. Milgate had started a second monumental task in laying out a new series of map sheets to replace the old Forestry Series.

This revision of maps took the form of 140 index sheets, each covering a rectangular area measuring 18 by 12 statute miles. A more detailed description of these maps may be found in the Annual Report of the Department of Lands and Forests for the year 1937. Since there never had been a systematic survey, an attempt was made to locate individual grants on the new topographic maps sheets prepared by the Topographic Survey of Canada. Sheets at a scale of 1/2 mile to an inch were obtained and the fitting together of this jigsaw puzzle was carried out by Harry Jackson, a very capable and experienced woodsman from New Brunswick who had been sent to Nova Scotia shortly before World War I to look after the Alfred Dickie lands that had been seized by the Royal Bank.

Once the information was plotted it was transferred to the new index sheets, an operation which created new difficulties and errors that might have been avoided if the topographic sheets had been retained for the finished maps. However, these new maps were a vast improvement over any previous maps—and they did suit the shape of Nova Scotia. Two experienced land surveyors, John D. MacIntosh and Roy M. Schofield, carried out the task of transferring the plots from the topographic maps to the final index sheets and, since often parts of three and sometimes four sheets had to be fitted on the finished map, this required both skill and patience.

The administration and enforcement of the Game Act required considerable time and effort, and during this period it was carried out largely by F.A. Harrison, E.P. Buchanan, the Rangers, and Game Sanctuary Wardens with assistance from the Royal Canadian Mounted Police. This was one phase of the Department's work in which the public took a keen interest. Many individuals were not backward in suggesting that they were well qualified to set seasons and bag limits, which in the minds of most people at that time was all that was needed to manage wildlife resources.

Night patrols to combat deer jackers required long frustrating hours, and many things were observed that did not appear in official reports. One night a Ranger and a Mounted Policeman checked a car parked in a woods road with a scantily clad man and woman inside. The Mountie inquired, "What are you doing here?" To which the man replied, "That's a stupid question." The Mountie continued, "Is that your wife with you?" The man answered, "Another stupid question."

Furbearing animals did not attract much public interest but were a valuable resource, putting money in the pockets of a few trappers and many farm boys, and producing still greater returns for a few fur buyers.

Many years before, beaver had been almost exterminated. A few had survived in the interior of the southwestern counties, and by the 1930s were increasing. Schierbeck had a few live-trapped and released in Waverley and Liscomb Game sanctuaries, and in 1934 F.A. Harrison had a few caught and released in Cumberland County. For the next few years Chester Gray, a warden in the Tobeatic Game Sanctuary, spent several weeks in late summer live-trapping beaver and releasing them in counties where they had been absent for decades. Records of these releases may be found in the Department's Annual Reports for that period.

It was a time when introductions of exotic wildlife were common. While the release of the so-called Daley deer into the province in 1894 and 1910 had received wide publicity, the early game laws suggest that attempts had been made to introduce pheasants, black cock and other exotic birds. None appear to have been successful until Hungarian partridge were released by Colonel Bob Willis at government expense in 1925. Pheasants were eventually established successfully in the 1930s, and, with the periodic release of additional birds, have managed to survive ever since.

During the mid- and late 1930s the small staff and meagre budget did not permit any expenditure on public relations. However, the Department had one old moving picture projector. E. P. Buchanan and I visited schools and service clubs, showing films obtained from the Canadian Forestry Association and giving talks, hoping to increase public interest in our forests and forest industries. It soon became apparent that the school audiences were the most interested and the most critical, and that better films were needed with some made in Nova Scotia. Some years later this became possible and a number of excellent films were produced.

Trees from the Provincial Forest Nursery were supplied free of charge to Boy Scouts, Girl Guides, schools and to private individuals. Otto Schierbeck had his Rangers set out small plantations in most counties to serve as demonstration

Chester Gray, Warden in the Tobeatic Sanctuary, played a key role in the Department's beaver restoration program in the 1930s. He later became Chief Warden for Yarmouth County.

Waverley Game Sanctuary Warden Loran MacPherson inspects a beaver dam on the Johnson River, December, 1934.

plots and to test the suitability of a number of exotic species under Nova Scotia conditions. One of the better of these plots was along the Boars-back Road in Cumberland County on land which became part of the Chignecto Game Sanctuary. In 1937 the Department planted trees in the Sanctuary on land burned that year, and has continued planting every year since.

At that time the cost of producing trees ready for outplanting was $30 per thousand; about 1,200 trees were needed to plant one acre, and planting costs averaged about $20 per acre. Cut-over land which often had been replanted by nature could be purchased for 25 cents per acre. It was possible then to buy 200 acres of cut-over land for what it cost to reforest one acre. With a small budget it seemed good sense to buy land and to limit reforestation projects to roadside planting for aesthetic purposes and to large burns where lack of seed trees would retard natural regeneration.

There were several large areas of barren Crown land where persons unknown set fires every year in the hopes of getting blueberries, or to make it possible to see for long distances during the hunting season. In an attempt to eliminate this practice, men were hired to plant trees during the period when fires were likely to be set. Here planting costs were largely offset by savings from firefighting, and the experiment was successful. Today some of these former fire barrens have fine young stands of man-made forests in which some trees have already reached merchantable size.

By 1936 the federal government was negotiating with the Province for land in Cape Breton for a National Park. In June of that year land was expropriated by the Minister of Highways, at that time the only person in the government with the necessary authority. The area included that part of Inverness County from the south shore of the Cheticamp River north to Cape St. Lawrence, excluding most of the settlements at Pleasant Bay and Red River. In Victoria County it ran from South Ingonish to the north side of the Cabot Trail, excluding the villages of North Ingonish, Neils Harbour, Dingwall and Cape North. In 1938 the land in Inverness County north of Pleasant Bay was abandoned and land south of the original expropriation was added.

The area delineated for park purposes included considerable vacant Crown land in Victoria County, still larger

In the winter of 1934 the Provincial Forester was sent to the Cape Breton Highlands to investigate rumors of caribou sightings. The tent is pitched on nine feet of snow with plenty of boughs for insulation.

areas of Crown land in Inverness and Victoria counties—held under the terms of a 99-year lease by the Oxford Paper Company of Maine, U.S.A.—and some 300 private holdings including 70 homes. The Minister of Highways sent two men to Cape Breton to negotiate with homeowners, but no settlements were made. Eventually the matter was turned over to the Department of Lands and Forests.

In 1938 I was sent to negotiate with landowners in the park. This was an entirely new experience, and again I was forced to learn the job through trial and error. While the setting aside of a large wilderness area for park purposes appealed to me, forcing people from their homes to make a playground for summer visitors seemed harsh and in many cases unnecessary. The work was interesting, sometimes funny, often frustrating and more often distasteful.

Many people were in homes where they had spent their entire lives, where they were contented and where they made a living farming, fishing, working at a trade—and sometimes a combination of all three. In many cases they produced most of their food, cut their own firewood and had developed a way of life that suited their needs. Even if they were paid more than the market value for their properties, and even if they were enabled thereby to buy better land and equally good or better homes, their way of life was disrupted. And in a strange location they were neither as contented nor as well off financially as they had been.

Negotiating for properties necessitated an examination of buildings, cleared land, woodland, and the searching of titles. The people involved were Acadians, Highland Scots, Newfoundlanders and Irish, and they often reacted in quite different ways. To help evaluate the buildings a carpenter was engaged, and Smith MacIvor, a recent graduate from law school, was employed searching titles and helping generally with settlements. This proved to be such slow work that someone in Halifax decided it could be speeded up by having settlements made in Court. During the Court cases we soon learned that we needed more expert help, and a successful farmer and a prominent architect were engaged. After their arrival the lawyer and the Provincial Forester were able to observe two smoothies at work.

At the first house visited, the architect asked to see the cellar. Here he admired the foundation and the floor joists, and he remarked that you didn't see many houses so well built nowadays. The farmer spied jam and pickles on a shelf and he told the lady of the house that he wished his wife could make jam and pickles that looked as good. At the next house the glum-looking owner was sitting on the doorstep and a Jersey cow was tethered in the yard. The farmer said that was a fine cow, but what had happened to one of her hind teats? The owner explained that she had stepped on it the last time she freshened, and as the owner knelt on one side of the cow, the farmer knelt on the other side admiring her milk glands and udder, and extrolling the virtues of the Jersey breed in general and of this Jersey in particular. All this time the architect was examining the house and making any necessary measurements.

At a third house the door was opened a few inches and a gruff voice asked, "Who in Hell are you?" On receiving the reply, "Oh, I am a farmer like yourself," the door swung open and the owner said, "Come right in; I thought you were another damn lawyer like MacIvor."

At one property in Pleasant Bay, the park took 110 acres of woodland, leaving outside the park a 30-acre field, 10 acres of woods, a good house and barn with some other small outbuildings. Accompanied by a lawyer I called on the owner, a widow with two grown-up sons. After inviting me into the house, the woman and her sons had a lengthy conversation in Gaelic, which did not enlighten me, and then the older son and I departed to examine the part of the property in the park. This proved to be a steep side hill that had been clearcut, leaving a few bushes of moosewood and mountain maple that would scarcely afford a hiding place for a rabbit.

Standing in any place one could see the whole property. After examining it for half an hour we sat down on a moss-covered boulder to discuss a settlement. Landowners had been accepting $6 per acre for their woodland, so I knew and the young man knew that the least he could expect was $660. However, to give him the pleasure of a little bargaining, I offered $500 and eventually he agreed to accept $700. We returned to the car where the lawyer was waiting and he informed us that the deed to the property had been recorded a week after the notice of expropriation, and he felt we should have the former owner sign a release.

The young man did not want to accompany us, but after some persuasion he came. The former owner was a dignified Highland gentleman, who, on hearing the purpose of our visit, suggested that he should receive half the settlement. The young man took a dim view of this suggestion. Eventually the old gentleman did sign, but with considerable reluctance. As we drove away, the young man kept muttering to himself in Gaelic. Finally I said, "That old man was unreasonable expecting to get half the money. You don't owe him anything, do you? You paid him for the property?"

A soft Highland voice replied, "Ach, yes, every cent, $150."

Settling the Oxford lease was quite another matter. The Oxford Paper Company engaged experts to cruise the property and prepare a logging plan to determine logging costs. The Department in turn had to engage other experts to check the company's figures.

While the area north of Pleasant Bay had been abandoned, it formed part of the Oxford lease. That company filed a claim for Injurious Affection. In August one of the logging experts and I decided to examine the area lying between Lowland Cove and Pollett's Cove. A fisherman put us ashore at Lowland Cove one morning and agreed to meet us at Pollett's Cove that evening. As we stepped ashore we were greeted by a patriarch standing on the beach, to whom the question was asked, "How long does it take to walk from here to Pollett's Cove?" The old gentleman considered the question and replied, "Well, when the snowshoeing is good you can do it in about two hours."

We had heard that at one time there had been a path between the two places, and on further inquiry a small boy was sent to lead us up a steep narrow path and set us on our way. When we reached the top, some 1,200 feet above the shore, my companion reached in his pocket and thrust a fist full of coins in the boy's hand. Possibly it was more money than the boy had ever owned, but if the coins had been red hot they could not have been dropped from his hand any faster. Watching, I was proud of the boy, a small figure on a wind-swept hill, his shoulders back, the coins at his feet, and his eyes the mirror of some Highland ancestor who had scorned the Sassenach gold.

We proceeded on our way, through alder swamps and fir thickets with bald eagles sitting like sentinels on dead stubs every few miles. Since it was a hot day and the snowshoeing was not good, it took us eight hours to reach our destination, where we were greeted by curious seals loafing just offshore.

On another occasion my companion, accompanied by a big Norwegian, spent a number of days in the interior of the park. One evening they reached a prominence affording a view of the wide sweep of forest-clad hills and valleys, an expanse of muskeg, and, through a narrow gap, a distant glimpse of the sea. As they stood in silence enjoying the beauty, the Norwegian said softly to himself, "God doesn't want this country to be logged; He intended it for a park."

Eventually most settlements were completed. But one old gentleman who had seen better days, and who owned several small parcels in the park, refused to accept payment although he was satisfied with the price offered. Years later he wrote, "Send me the money for my land. I had seven judgements registered against me, and I can thank my Maker that I have lived long enough to see the last one outlawed."

The Oxford Paper Company claim was settled in Court after six long weeks, and the evidence presented was at times enlightening. An earlier government had issued a 99-year lease for some 600,000 acres of woodland for an annual rental of $6,000 dollars plus an undertaking to build two pulp mills, one in Inverness County and one in Victoria County. A later government now had to buy back a part of the lease and preferred not to make an offer but to let a Court decide what should be paid.

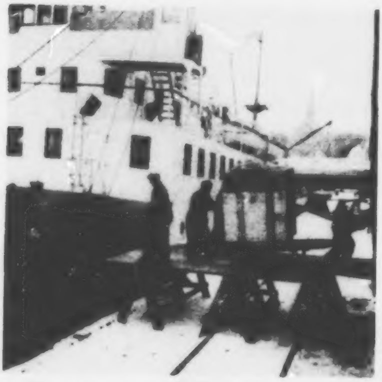
As mentioned earlier, evidence presented at the Court hearing showed that F.J. Barnjum had done well by this deal. He had in fact sold the lease to the president of the Oxford Paper Company at a profit of $1,000,000. The president in turn sold the lease to his own company at considerable profit. Moreover, while the terms of the original lease stipulated that two pulp mills were to be built and that no wood was to be shipped in an unmanufactured state, these terms were later altered. One rossing mill replaced two pulp mills, and wood that was rossed, hand-shaved or sap-peeled qualified as manufactured and could be exported. From 1902 to 1916 small operations had been carried out by Barnjum and from 1917 to 1931 there were much larger operations by the Oxford Paper Company. A detailed report on the Oxford Paper Company operations was prepared by the late Gordon Harvey in 1933, and copies are on file at the Department of Lands and Forests in Halifax and at the Public Archives of Nova Scotia.

In April of 1939, nine caribou arrived in Halifax from Newfoundland. The original shipment had been nine females, and one adult bull which died. Of the animals which arrived, six were adult does carrying calves, but two aborted shortly after arrival. The four pregnant females were trucked to the Liscomb Game Sanctuary and liberated in hopes that at least one male would be born. The other five—three adults and two yearlings—were taken to Lake William in Lunenburg County where two more died. Eventually the remaining three were also liberated in the Liscomb Sanctuary. With present knowledge of proper release techniques and of the vulnerability of caribou to whitetail deer parasites, it is clear that this attempt to re-establish caribou in Nova Scotia was doomed to fail. But at the time high hopes were held for its success.

During the year lumbermen from Nova Scotia and New Brunswick, with financial and moral support from both governments, formed the Maritime Lumber Bureau and sent a representative to the U.K. to promote the sale of Maritime lumber.

The Crown land survey, fire protection and game law enforcement required the usual amount of time and effort, and in the office, the revision of the Crown index sheets continued along with innumerable routine tasks.

Although the province was slowly recovering from the Depression, there still was very considerable unemployment. To offer some relief the federal government sponsored a National Forestry Programme to provide work for young men from needy families. In Nova Scotia the Department of Lands and Forests was responsible for part of the programme. A camp was set up in the Chignecto Sanctuary in charge of Edward L. Boulter, an experienced forester. Young men, mostly from coal mining towns, were enrolled, and a start was made in building a system of motor roads in the sanctuary. Trees had now been planted there for three



Woodland caribou arriving in Halifax from Newfoundland on the ***S. S. Bellisle****, April 10, 1939.*

Caribou being transported to their release site on the Liscomb Game Sanctuary.

Caribou upon being released near . Trafalgar, April 11, 1939.

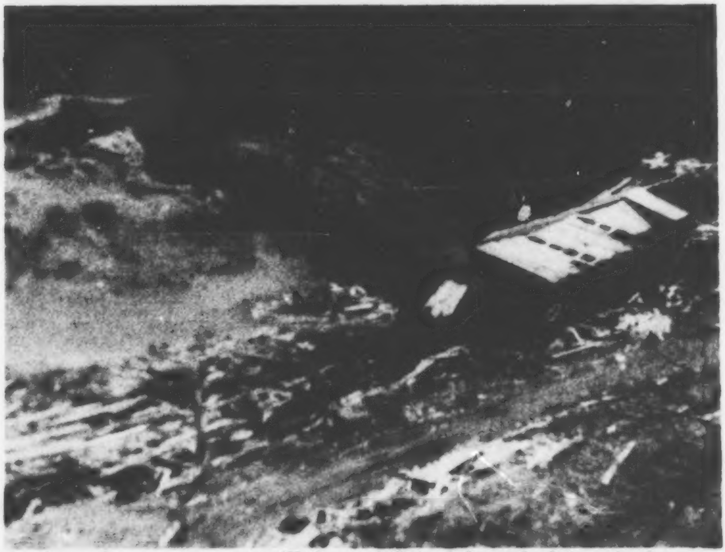
successive years, and a considerable area of recent burn was cleaned and prepared for planting in 1940. Some miles of telephone line were erected, young stands were thinned and a good start was made on improvement work that has been carried out in the Sanctuary ever since.

The War Years

The outbreak of World War II in September, with its recuitment of young men for the Armed Forces, changed the unemployment picture drastically and the National Forestry Programme ended in November.

Sawn lumber, pit props and pulp wood were now in great demand and the number of portable sawmills operating in the woods increased dramatically. At that time most mills were steam powered, and while a few installed "Dutch ovens" to burn the sawdust, the majority had a ever-growing pile of sawdust beside a slab fire which during the winter months burned day and night. Sometimes the sawdust would cover the slab fire, the mill would move and a few months later fire would erupt from the sawdust pile and spread to the neighbouring woods. Pumping water on a burning sawdust pile would hold the fire in check but would not put it out. To extinguish the fire the sawdust had to be turned over and thoroughly soaked. Without mechanical equipment this meant turning the pile over shovel-full by shovel-full, an expensive and time-consuming job.

Rail traffic also increased, which meant that both the steam locomotives and the rights-of-way needed constant inspection to prevent forest fires. The Railway Act required that the safety appliances be kept in good order and inspected from the first of April until the first of November. Under the provisions of the Act employees of the



In the early years most sawmills burned their slabs and edgings in the open (above). Often fire spread to a nearby sawdust pile or to the woods. The pile in the lower picture ignited and burned for three years before we got the fire out.

Department of Lands and Forests were appointed inspectors and they made periodic visits to the roundhouses to check the locomotives. Defective screening in the smokestacks and faulty ash pans could and did cause fires.

A locomotive hauling a heavy load upgrade was capable of driving cinders through its smokestack high in the air and a cross wind could carry them long distances into the woods. Also, live coals falling through a defective ash pan often set fires along the right-of-way, which in turn spread to fields and woods.

With increased activity in the woods it was necessary to check the timber leases, particularly those with a 10-inch diameter limit. Clearcutting had become the usual practice on pulpwood and pitwood operations and the Minister cancelled a number of leases where flagrant cutting under the limit occurred.

A couple of firsts for the Department can be recorded for 1940. It produced under contract a short colour movie of woods operations near Porters Lake, Halifax County to show in the schools. This silent 16mm film was followed in later years by many fine films produced for the Department by Mrs. Margaret Perry, Ned Norwood and others. In August of 1940 a bulldozer was used for the first time to build a line around a stubborn fire. This occurred at Hardwoodlands, Hants County, and since ground conditions were favourable it proved quite effective.

During the year 90 of the 20-year timber leases expired and five were cancelled. The area involved totalled 27,263 acres, and purchase of cutover land added 15,491 acres to the Crown holdings.

Birch dieback, reported in New Brunswick for some years, was now becoming evident in Nova Scotia. In New Brunswick the bronze birch borer was believed to be the cause, but in Nova Scotia it became apparent that the borer attack was secondary, following the commencement of the dieback. While careful studies were carried out over a period of years and several theories advanced, no one definite cause was ever determined. Fortunately the problem seems to have long since disappeared—but not before millions of feet of valuable birch were lost.

The revenue of the Department in 1940 was $164,663.58 and the expenditures were $105,650.90, showing a surplus of $58,907.68. Salaries paid to all permanent employees totalled $40,105.70.

The year 1941 was not particularly outstanding. Routine work was carried out on schedule. Survey parties worked in Queens and Shelburne counties, with lines run around 25,000 acres in Queens and 74,000 acres in Shelburne. One hundred and five timber leases expired and five were cancelled for a total 40,389 acres; 22,880 acres were purchased.

In 1942 important legislation was passed, including The Small Tree Conservation Act and An Act Respecting the Licensing of Scalers, but neither Act was proclaimed until some years later. A very active fire prevention campaign was carried out in the schools and in the press. Two fire towers were erected, one at Ellershouse, Hants County and the other at Waverley, Halifax County. The Crown land survey again progressed at a satisfactory pace in Queens and Shelburne counties.

About this time a young forester, David Dyer, was engaged on a temporary basis while he waited to be called up for officers' training. But shortly afterward he required surgery which made him unfit for active military service and he was hired by the Department on a permanent basis.

The following year a former employee of the Department, F/Sgt. Stewart MacDonald, was reported missing in action overseas. Many years later a small grove of trees that he had planted in the Chignecto Game Sanctuary was officially named the Stewart MacDonald Memorial Grove in his honour.

Dave Hudson returned to work for the Department and was appointed District Forester with an office in New Glasgow and a territory covering Pictou, Antigonish and Guysborough counties and that part of Halifax County lying in the Liscomb Game Sanctuary.

Twenty-nine cutting licenses were issued on Crown land covering 2,355 acres. The stumpage on one 50-acre lot was sold lump sum for $2,000 and other stumpage ranged from $4 to $8 per 1,000 F.B.M. [Feet Board Measure]. Land purchased during the year totalled 62,940 acres—the largest area purchased in a single year up to that time.

The beaver restocking program had proven so successful that it was decided to permit a short open season, from November 16 to November 30, in Lunenburg, Queens, Shelburne, Yarmouth, Digby, Annapolis and Kings counties. Trappers were licensed and permitted to take three beaver in the counties in which they resided. The pelts were marketed by the Department and an average price, regardless of size or quality, was paid to each trapper. A total of 2,789 pelts was sold by the Canadian Fur Auction at the winter sale of 1944 and the trappers received $39.22 per pelt.

In the winter of 1944 the Chief Rangers were invited to Halifax for a two-day conference and given a chance to express their views about fire protection and game law enforcement—something most were only too willing to do. This became an annual event and helped to improve the morale of men who at that time were grossly underpaid. Early in the year the position of Provincial Entomologist was established and in April Lloyd S. Hawboldt was appointed to the position. For the next few years his work complemented the studies of the Federal Service but in greater detail. Forty-one cutting licenses were issued covering 3,017 acres of Crown land. Seventy-six leases expired and two were surrendered for a total of 13,439 acres.

The Crown Land Survey had now been in progress for 10 years. Three survey parties were in the field during the year, working in Cumberland, Colchester, Pictou, Halifax, Hants and Lunenburg counties. Working with the party in Lunenburg was a student named Donald L. Eldridge, who probably did not suspect that in years to come he would be the fifth person to hold the position of Deputy Minister of Lands and Forests.

From the start of the survey in 1934 until the end of the field season in 1944, a total of 1,217,758 acres had been surveyed, requiring over 3,000 miles of finished boundary and the setting of more than 8,000 corner posts. This amounted to about 53 per cent of the land then owned by the Crown and it included some of the larger blocks on the mainland and much of the easier land to survey. Eighty-five out of a total of 140 index sheets had been completed and this work was proceeding in a satisfactory manner.

In August a brief, signed by 11 Nova Scotia members of the Canadian Society of Forest Engineers, was presented

Surveyor "Rusty" March (top) points to a maple that has been chopped to reveal a 50-year-old blaze (centre). Below, a typical post set in a stone mound, Crown Land survey near Vaughan, Hants County, December 1936. Location information was scribed on the post by hand.

to the Hon. J.H. MacQuarrie making detailed recommendations for the management of Nova Scotia's forests. The entire brief was printed in the Annual Report of the Department of Lands and Forests for 1944.

At the request of C.J. Burchell, the Canadian High Commissioner in Australia and a native of Cape Breton, the Department shipped about 150 trees to New Zealand to be planted in commemoration of the Scottish settlers from Cape Breton who had gone to New Zealand some 90 years earlier. Due to the long voyage the trees arrived in poor shape, but about 100 survived and were planted at Waipu and possibly at one other location.

The cutting and exporting of Christmas trees had now become an important seasonal industry, with balsam fir making the bulk of the shipments but with an increasing number of red spruce and red pine as well. Many lumbermen were opposed to the cutting of spruce and pine for this purpose since they believed it could adversely affect timber production in the future.

Export was under the jurisdiction of the federal government, and the federal authorities refused to take any action. But the Minister solved the problem by passing legislation requiring a person or company buying Christmas trees for resale to purchase a license—and the license issued covered balsam fir only. In 1944, 13 Christmas Tree Buyers licenses were issued and 1,280,215 trees were exported. The largest buyer shipped 656,728 trees and the largest resident buyer 228,800. By contrast, 120,000 trees were produced by the Provincial Forest Nursery and 10,000 were planted on Crown land.

The Annual Report for the year 1944 was signed by F.A. Harrison for the last time as Director, and in the following year he signed as Deputy Minister. So Mr. Harrison was the last Deputy Commissioner of Crown Lands; he was Acting Commissioner of Forests and Game, the only Director of the Department of Lands and Forests and its first Deputy Minister.

The Post-War Years

By the beginning of 1945 hopes were high that the war would soon end, and plans were being made for the training of young men returning from service in the Armed Forces. With war in Europe ending in May, it became possible in June to start an aerial forest patrol. Orville Pulsifer Sr., just discharged from the Air Force, took a contract to supply two Tiger Moth biplanes equipped with radio and loud hailer. E.C. Dauphinee, who had flown a Spitfire overseas, was engaged as a second pilot, with Ian Saunders as engineer and a fourth man in the office to keep the books and tend the radio.

In July J.H. MacQuarrie accompanied a delegation of lumbermen to the U.K. to discuss the sale of Maritime lumber. The group was flown across by the R.C.A.F. with a stop in Iceland to refuel. At that time trans-ocean flying was considered so hazardous that life insurance policies held by the delegates were cancelled for the duration of the flights.

The war in the Pacific ended in August and plans to help veterans return to civilian life were speeded up. The New Brunswick Government asked Nova Scotia to send someone to Fredericton to discuss the establishment of a school to train forest technicians. As Provincial Forester I was sent to the meeting with authority to promise a donation of $50,000 from Nova Scotia toward the capital cost of the school. The Maritime Forest Ranger School was the direct result of this meeting, with the New Brunswick Government contributing $100,000 and industry $75,000—New Brunswick I.P. [International Paper] $25,000, Fraser Companies $25,000, Bathurst [Pulp Company] $15,000 and Mersey Paper Company $10,000. Many years before, there had been a gentleman's agreement between the two provinces that education in forestry would be provided by New Brunswick and in agriculture by Nova Scotia, so Nova Scotia was not asked for further financial support.

Three survey parties were active during the season from May to October and studies on birch dieback were carried out under the direction of Lloyd Hawboldt.

The trapping of beaver was again permitted in the same counties as in 1943, during the same period and with the same limit on animals taken. Trappers were successful in taking 6,144 pelts, which were again sold at the Canadian Fur Auction Sales in Montreal early in 1946.

A number of Nova Scotians had graduated in forestry just before or shortly after the outbreak of war and had joined the Armed Forces. Late in 1945 and early in 1946 they began to return to civilian life and to seek employment. Among some of the first to return from overseas were three Bobs—Allen, Burgess and Murray—and all three applied for work with the Department. Bob Burgess was persuaded to join the teaching staff at the Maritime Ranger School in Fredericton, which opened in April, with the understanding that he could join the Department whenever he wished. R.R. Murray and R.K. Allen took employment with the Department immediately and soon were joined by Harry A. Grant, Allister T. Fraser and Edward L. Boulter.

With a nucleus of foresters it was now possible to pay a little more attention to the management of the Crown lands, and, with the Small Tree Act proclaimed on September 1, 1946, private lands demanded attention as well. The Small Tree Act prohibited the cutting of spruce, pine and hemlock less than 10 inches in diameter (measured at a point one foot from the ground) without a permit from the Minister. About the best that can be said in favour of a diameter limit is that it is better than nothing, and the Act did prevent the cutting of many small trees that required a few more years' growth to produce good quality saw logs. It also put the government foresters in the woods in company with landowners and lumbermen, to the mutual benefit of all concerned.

One landowner who was unhappy with the Act visited the office to talk about the small trees on a lot which he owned. Said he: "How long will it take my trees to reach legal size? I am 75 years old, and under the normal course of events I can only expect to live 25 or 30 years more." The poor man lived for only about five more years, but the trees kept on growing.

Two additional fire towers were built that year at Bear River, Digby County and at Kirk Hill, Cumberland County. Firefighting equipment owned at that time included 83 motor pumps, 2,079 back tanks with hand pumps, 1,767 pails, 606 grub hoes, 339 axes, 1,180 shovels and a one-ton truck. Three survey parties worked on Crown land boundaries with 324 miles of completed boundary enclosing 52,000 acres. Land purchased during the year totalled 7,219 acres and the total purchased up to that year amounted to some 250,000 acres.

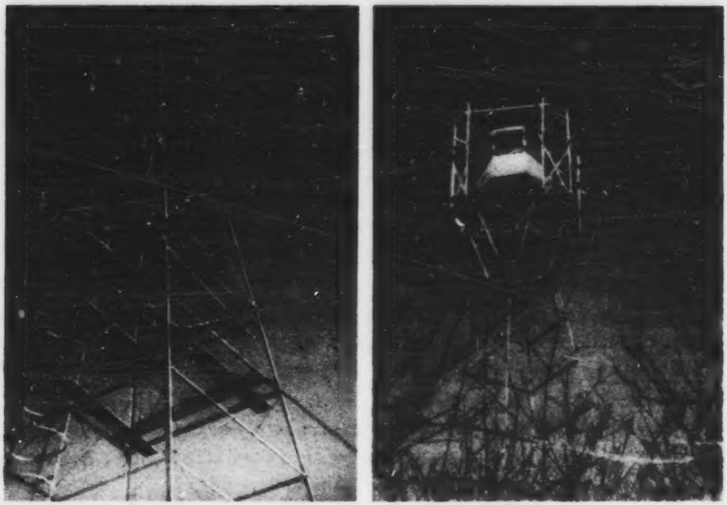
Cruising of Crown land had not been carried on during the last years of the war, but a cruising party was again active under Party Chief Harry Grant, with Allister Fraser as one of the cruisers. A total area of 51,400 acres was cruised in Cumberland, Colchester, Pictou, Halifax and Hants counties. The party also spent two and a half weeks fighting a bad fire.

Lloyd Hawboldt reported that the dieback of birch was continuing, and somewhat worse than in 1945. To combat the European spruce sawfly and the larch case bearer, parasites were provided by the Dominion Parasite Laboratory. The spruce sawfly had caused extensive damage in Quebec. For a time we feared it would prove as destructive as the budworm. But parasites and disease brought the attack under control before it became a serious problem in Nova Scotia.

Twenty-nine Christmas tree dealers licenses were issued and 1,900,000 Christmas trees were exported.

The method of selling Crown stumpage now required the land to be cruised, with a report submitted recommending any necessary regulation or restrictions. Timber sales were advertised in the local papers and stumpage sold to the

Eldon McCall cooked for a fire-fighting and road-building crew made up of graduates of the first Maritime Forest Ranger School class. (Kirk Hill, Cumberland County, 1946.)



Lands and Forests crew constructing the Kirk Hill fire tower north of Parrsboro, Cumberland County in November, 1946.

highest bidder. Horses still provided most of the power for moving logs in the woods, and selective logging—or more often cutting to a diameter limit—was common practice on Crown lands.

Mr. Harrison had attended several wildlife conferences in Washington, D.C. and had become acquainted with wildlife biologists and their game management philosophy and techniques. In 1947 he engaged Austin Cameron to carry out wildlife research with special attention to moose.

Early in the year the Department made the largest purchase of fire equipment for any year up to that time. Fire equipment now included 125 motor pumps, 2,152 back pumps and 315,750 feet of motor hose along with two tractors, several heavy trucks and a truck and low-bed trailer. Nevertheless, a bad fire season proved this to be wholly inadequate. A total of 44,929 acres was burned. Firefighting costs amounted to $143,641.02, the estimated forest damage was $254,370 and other property damage came to $407,100. The aerial patrol was active for its third year, flying 1,300 hours on fire patrol and transporting fire fighters and equipment. A standby crew of firefighters made up of students from the Ranger School was stationed in Cumberland County and they fought fire from Shelburne County to Pleasant Bay, Inverness County.

Four survey parties worked during the season with Joseph F. Archibald in charge of the fourth party. Three hundred and fifty miles of boundary were completed and 1,039 corner posts were set, enclosing 67,000 acres. In addition 43 miles of old line were cleaned and reblazed and some 9,694 were reconveyed to the Crown.

A survey school that had started in Halifax late in the war to train army personnel was transferred to Lawrencetown, Annapolis County under Major Church, to offer courses in land surveying to young men from the Forces returning to civilian life. H. Bert Robertson, Walter Servant and Hoyse Cameron, members of the first class, joined the Crown Land Survey in the Spring of 1947 and were joined by Ernie Boehk a year later.

Sixty-seven cutting licenses covering 4,418 acres were issued and five licenses with an area of 499 acres were renewed.

Newly completed Maritime Forest Ranger School outside Fredericton, New Brunswick, 1946.

Nova Scotia Land Survey Institute, Lawrencetown, Annapolis County. Walter K. Morrison photo.

The Provincial Nursery produced 150,000 trees and a small transplant nursery in the Chignecto Sanctuary an additional 10,000. About 15,000 trees were planted in the Chignecto Sanctuary and some 10,000 were planted by school children in Pictou, Antigonish and Guysborough counties, a few by Boy Scouts and about 100,000 by private individuals.

The deer kill reached a total of 29,280—14,903 bucks and 14,377 does, a record up to that time.

Late in 1947 R.J. Milgate retired to be replaced by V.P. Harrison; and D.W. Hudson, District Forester in New Glasgow, resigned and returned to Fraser Company in New Brunswick. In September 1947 the Hon. J.H. MacQuarrie was appointed a Judge of the Supreme Court of Nova Scotia and was replaced by A.W. MacKenzie as Minister of Lands and Forests. MacQuarrie had been Minister for 14 years. While he knew little about the woods, he had carried out his duties in a most satisfactory manner. With his legal training he weighed both sides of every question, sought advice from people he trusted, and was slow in reaching a decision. But once he decided on a policy you could carry it out and be sure of his support.

The Hon. Arthur W. MacKenzie also proved to be a good Minister, but his temperament and background were vastly different. MacKenzie was country bred, had worked in the woods as a young man and knew first-hand many of the problems of the lumbermen and small landowners. He had joined the army when under age and served overseas in World War I, had studied at the Nova Scotia Agricultural College, and had been graduated from the Ontario Agricultural College in Guelph, Ontario. He had held a variety of positions with industry and government. He enlisted early in World War II and on his return was appointed Deputy Minister of Agriculture. Later he became Minister of Agriculture; then he was to hold the dual portfolios of Agriculture and Lands and Forests. Unlike MacQuarrie he tended to make up his mind fast, but like MacQuarrie he was strictly honest.

Because of the heavy fire losses in 1947 the Department was permitted to make substantial purchases of firefighting equipment in 1948. This now included 232 motor pumps, 4,050 back pumps, 630,000 feet of motor hose, eight jeeps, six heavy trucks, a five-ton truck with low bed trailer, six tractors, and 10 portable water tanks. Two standby crews were employed, one at Chignecto and the other at Stanley, Hants County. Since the fire season proved to be the exact opposite from the previous year, with only 109 fires burning 913 acres, these men were gainfully employed planting trees, building roads, and cleaning and thinning young stands.

On October 31, 1948 the Department of Public Works turned over to the Minister of Lands and Forests the just-completed fire equipment depot at Shubenacadie, which was placed in the charge of Owen Barr with Rupert Fisher and Jack Dickie as assistants.

Four survey parties were again employed, with party chiefs Schofield, Archibald, Servant and Cameron, and with Rusty March now supervising all field work.

Studies on birch dieback were continued by Lloyd Hawboldt, a second small transplant nursery was started in Pictou County, and about this time Denis A. Benson was engaged as Wildlife Biologist to carry on the work started by Austin Cameron.

The Annual Report for 1948 lists the following foresters in the employ of the Department:

Provincial Forester	G.W.I. Creighton	Halifax
Extension Forester	D.A.S. Dyer	Halifax
District Foresters	E.L. Boulter	Windsor
	R.H. Burgess	Truro
	A.T. Fraser	Baddeck
	H.J.A. Grant	Yarmouth
	R.R. Murray	New Glasgow

Late in the year F.A. Harrison retired after a long and distinguished career.

An open season on beaver in December, 1948 had resulted in a catch of 9,494 pelts which were marketed early in 1949. Once again the Department arranged for the sale, and paid each trapper the average price. Cheques for the full amount were mailed on the same day, and when they were received, trappers from North Queens, South Annapolis, and Northwest Lunenburg poured in to the bank at Caledonia, Queens County to get their money. An hour after the bank opened it was out of cash and by six o'clock that evening the liquor stores at Bridgewater and Liverpool had no more beer.

In February 1949 I was appointed Deputy Minister. Immediately my responsibilities were widened and changed; but fortunately a knowledgeable secretary, Mary A. Murphy, made the new job much easier. It was no longer possible to spend as much time outside Halifax and in the woods. Discussions with the Minister were frequent; administration of the Game Act required a great deal of time, and revenue and expenditure required consultations with Harry J. Lynch, our very competent accountant. The administration of Crown lands, fire protection, surveys, and extension also needed some attention.

One of my first tasks was to select a new Provincial Forester. Three men were considered, but eventually the appointment went to Bob Burgess, the District Forester from Truro. Ed Boulter, District Forester from Windsor, became Assistant Provincial Forester. Aside from these slight changes in personnel, the Department continued to function as in previous years, with fire protection unfortunately continuing to demand too much time.

During 1949 a total of 329 fires burned 5,106 acres. Losses would have been much greater had it not been for the trained crews at Chignecto, Stanley, the Shubenacadie Depot and the Aerial Patrol. It was becoming increasingly clear that more crews of trained firefighters were needed. In the past volunteers were helpful, but it often took several days to get any semblance of discipline over an unruly mob, and by then the fire was burning out of control. Further, the small wage paid to casual firefighters made it increasingly difficult to get volunteers—but higher wages could have resulted in more fires. On a number of occasions men from Stanley and Chignecto were moved long distances by air to the scene of the fire and had the fire extinguished before the local Ranger could round up a crew of volunteers.

Although the firefighting service was improving, fire prevention left much to be desired. In the carefully managed forests of Europe, forest fires were rare, for obvious reasons. No logging slash was left on the ground, roadsides and stream banks were kept neat and tidy, there were no portable

S. J. Haslam from Sussex, New Brunswick operated a mill at Porter's Lake, Halifax County in the 1940s. One of our better lumbermen, he hauled most of his logs with horses, icing the roads to make the going easier. This is a load of hemlock.

steam mills, railway locomotives did not start fires, there were no land-clearing fires, and in the public mind forests were too valuable to destroy. Here in Nova Scotia conditions were the exact opposite. Moreover, the Lands and Forests Act gave the public the right to light fires for purposes of cooking and warmth. Many a disastrous Spring fire started from a lunch fire set by a sports fisherman. While some thought was being given to the removal of fire hazards, little was actually being done. Logging slash was an ever-present hazard, particularly along public highways, streams and lake shores. Public opinion was slowly changing; but most fires still resulted from human carelessness—and many were deliberately set.

By this time a goodly number of young ex-service men were graduating from the Maritime Ranger School and the Department was able to offer jobs to any who wished to enter the government service.

In order to have a central base where these men could be assembled and receive some initial training, a number of wooden buildings in the Chignecto Sanctuary were dismantled, moved to Shubenacadie and reassembled. Eldon McCall, cook at Chignecto in 1939, was rehired, and for a number of years he presided over the cookhouse at Shubenacadie. McCall was an excellent cook of the old school, having cooked on sailing vessels, in lumber camps, and for construction gangs. In his cookhouse he ruled supreme. He was an interesting character and in spite of his strict discipline and the wide difference in age, he got along surprisingly well with this group of younger men.

The Shubenacadie Depot was now an interesting and active spot, with the Ranger School men gaining practical experience in a variety of woods work and assisting the regular staff in the maintenance of equipment. Among these was L.A. Corkum, ex-Air Force, a young man with woods experience and mechanical ability. He teamed up with Owen Barr, the Mechanical Superintendent and his assistant, Rupert Fisher, to design new firefighting equipment and improve existing equipment.

M.J. "Curly" Selvet, an ex-paratrooper, was being introduced to woods work and eventually took over from Fulton Reid the building and maintenance of fire towers. Another was Eldon Pace, ex-Navy, who was asked to raise pheasants for re-stocking throughout the province. Before long he was showing so much skill in caring for birds and animals that plans were made to establish the Wildlife Park where he has since been in charge for many years. Several other young men, including Ross Parks and Walter Webber, left the employ of the Department and went with private industry where they soon proved their worth.

For several years the Extension Division under David A.S. Dyer had been setting up displays at county fairs. In 1949 Charles MacKenzie, an ex-lumberman from Windsor and a man of many skills, designed a portable building and a scale model sawmill that were taken to five exhibitions that year, and to many more in following years.

That year the Surveys Division under Rusty March had six parties in the field, running the boundaries around 130,000 acres of Crown land. This required 652.6 miles of completed boundary, 734 miles of trial and connection line, and the setting of 1,670 corner posts. With a growing staff of foresters, surveyors and Ranger School graduates, it was becoming possible to pay more attention to the public lands which in the past had been neglected and plundered. The area of Crown land now surveyed totalled 1,578,758 acres. Forty-eight timber leases expired during the year, having an area of 9,205 acres; 5,916 acres were purchased and added to the public holdings and the area purchased now totalled 267,366 acres.

The crews at Stanley and Chignecto were building roads, thinning young stands, planting trees and carrying out improvement and salvage cuttings as well as fighting fire. The District Foresters were becoming familiar with the lands in their charge, selecting and cruising areas which needed to be cut, and doing the various jobs required in the administration of the Small Tree Conservation Act.

Up until this time the Chief Rangers—or Provincial Rangers as they were now called—had been in charge of all work in their respective counties. Since most were older men, many of them ex-lumbermen accustomed to giving orders, they found it a little upsetting to find younger men taking over what they considered their duties. However, there was more than enough work for all. The older Rangers were left in complete charge of firefighting and game law enforcement, and they soon welcomed assistance from these new members of the Department.

Crown land stumpage sold by public tender resulted in 67 timber licenses being issued, together with 75 fuelwood licenses and five for Christmas trees. The area covered by these licenses amounted to 11,574 acres.

The District Foresters at this time were Bob Allen, Allister Fraser, Harry Grant and Bob Murray. Graduates of the year Gerald Phinney, Hollis T. Routledge, Fred A. Sturmy and Angus MacMillan were foresters at large. Hawboldt was Provincial Forest Entomologist and Benson was Provincial Wildlife Biologist.

A wildlife biologist was something new to the licensed guides and sportsmen of the province, and it was interesting to watch Benson in action at public meetings. A few came to the meetings to heckle and to demonstrate what they considered to be their superior knowledge, but Benson knew his job and could think on his feet.

At that time hunters were rightfully concerned about the number of sick moose. At one meeting a professional man started to cross-examine Benson with the idea of making him look foolish. He asked about the body temperature of a sick moose and of calf moose. On receiving the answers he asked for the temperature of adult healthy moose. A few in the audience began to snicker, but Benson replied, "You know, I've never been able to get close enough to a healthy moose to stick the thermometer in the place it has to go." The women in the audience laughed immediately, but the men were a little slower until a raucous voice in the rear called out, "That was a four-base hit that time." From then on the meeting belonged to Benson. A few years later, when the Department acquired the equipment to tranquilize animals, Benson could have supplied all the answers.

Complaints about game law infractions were frequent. Many complaints were received about one man reputed to be killing moose illegally. After a long and careful investigation the man was apprehended with a freshly killed animal. He was prosecuted, convicted and ordered to pay a fine. Being unable or unwilling to pay his fine, he was sent to jail. The Lands and Forests Act requires that illegally killed game be

In the 1930s the provincial Department of Tourism endeavoured to promote Nova Scotia's outdoor attractions with displays like this at the annual Sportsman's Show in Boston.

turned over to charity, so the moose carcass was given to the Salvation Army. The wife of the man in jail appealed to the Salvation Army for help to feed her family, and they gave her the moose.

The four game sanctuaries maintained by the Department afforded valuable study areas to compare conditions where hunting and trapping were prohibited with those in the rest of the province, where they were permitted. Waverley, the smallest of the four, had been set aside as a wilderness area for the Boy Scouts and was in the charge of Loran MacPherson, a competent and dedicated Warden.

Tobeatic Sanctuary was heavily wooded with some exceptional stands of eastern hemlock. Some of the land belonged to the Crown, but most was owned by the Mersey Paper Company. The Sanctuary was patrolled by Wardens Hayward Strang and Winston Hurlburt, both experienced woodsmen and competent canoemen. Liscomb Sanctuary was also well wooded, with fine stands of spruce and hardwood. Again considerable portions belonged to the Crown, but the best timber was on the properties of two pulp companies and several lumbermen. William Jewers and Otty Parlee were the Wardens. Jewers, who had been on the Sanctuary for many years, was an excellent woodsman and canoeman who took great pride in his work. A man who could not remain idle, he made snowshoes and violins during rainy days and evenings.

Most land in the Chignecto Sanctuary was Crown land, purchased from lumbermen and other private landowners. At one time it had been heavily timbered, but much had been burned in a succession of fires which left only scattered patches of merchantable timber. It was now a Crown land management unit, with a small nursery, a sugar bush and—for Nova Scotia—relatively large plantations, which were being enlarged every year. Jack Goodwin and Howard Brown were the dedicated Wardens, who, in addition to patrolling the Game Sanctuary, tended the nursery, operated a sugar bush, and supervised the planting of trees.

The staff in the Halifax office was growing slowly, and the opening of district offices was adding to the overall size of the Department. The dollar still had considerable value, and salaries appear very small compared to those paid in later years. The Deputy received $6,000 per annum, the Provincial Forester $5,000, and the other salaries were in descending order.

Revenue for the year totalled $404,680.50, ordinary expenditures were $469,058.11 and capital expenditures were $159,808.03. The sources of revenue were:

Provincial Land Tax	$76,467.62
Provincial Fire Tax	28,747.26
Crown Land Timber Licenses, etc.	85,760.99
Game Licenses	173,624.71
Fines and Forfeitures	11,934.48
Royalties	23,762.81
Machinery Rentals	3,193.00
Miscellaneous	1,189.68

The two largest items of ordinary expenditures were salaries, $149,414.14, and firefighting, $99,761.10.

Forest production at that time came almost entirely from private land with more than half coming from small woodlots. It would be some time in the future before the Crown lands would produce any sizable volume. Softwood long lumber production for the year totalled 28,822,000 F.B.M. with hardwood 35,079,000 F.B.M. Pulpwood was 167,633 cords and pit props 51,930 cords; railway ties, shingles, laths, staves and headings, boxwood and piling accounted for considerable additional volume.

Cutting and exporting Christmas trees was becoming an important seasonal industry and more than two million were shipped to the U.S.A. in some 1,094 railway cars. The Department was studying this industry and was producing a film to demonstrate how the quality of balsam fir Christmas trees could be improved.

In 1948 the Provincial Forest Nursery at Lawrencetown, Annapolis County supplied about 130,000 trees which were planted by school children, Boy Scouts and private landowners. Some few thousand were planted on Crown land. The demand for trees far exceeded the supply. It appeared that the need at that time was for about one million trees a year.

The Forest Entomologist reported that the spruce budworm was inactive in Nova Scotia but that the black-headed

A staff meeting in the 1940s brings together (left to right) Gladstone MacKenzie, Dick Cotton, Dave Hudson, Harold Whitman.

budworm was causing severe damage in parts of Cape Breton. The forest tent caterpillar was causing considerable damage in the Annapolis Valley and in Cumberland and Colchester counties, and birch dieback was also causing serious damage to white and yellow birch. But the cause of the trouble had not been determined—and in fact never was.

The reported kill of white-tailed deer was 29,256, made up of 15,631 bucks and 13,625 does. Moose were reported scarce in all counties except Cumberland, Colchester, Antigonish counties and eastern Guysborough County, where they were reported plentiful and in a healthy condition. A wildlife survey of mainland Nova Scotia was carried out with the primary aim of obtaining an overall picture of the present condition of moose and white-tailed deer herds, and to use this information in formulating detailed plans for a more intensive study.

The trapping of fur-bearing animals had long provided some ready cash to men and boys in the country districts, and fur farming produced considerable revenue. While the Department of Lands and Forests licensed fur farmers and collected royalties from wild fur exported from the province, it had done little more than set seasons. More recently, in the case of beaver, it had restocked sections of the province where they had been long extinct and then set seasons and a bag limit and marketed the beaver pelts taken.

During 1949, Mr. C.F. Whitman—a Provincial Ranger from Round Hill, Annapolis County who was also a land surveyor and a former businessman with some experience in fur farming—was asked to visit the fur ranches to report on existing conditions and determine what support if any was needed by the industry.

The Fifties

In the Department's Annual Report for 1950 are two reports by Mr. Whitman which show that 85 fox ranches were still operating, with the small total of 651 animals kept as breeders—65 per cent silver and the remainder mainly platinum, white-marked, and a few pearl platinum and glacier blue. Mink ranching presented a somewhat more promising picture, with 115 ranches having 6,346 breeders, of which the number per ranch ranged from 3 to 465 animals. A total of 11,101 pelts was produced and 191 live mink sold, of which 110 were exported. The average price received from mink pelts was $12.29 and the average cost of feeding was $6.24.

Mr. Whitman continued to work with the fur ranchers for a number of years, organized exhibitions and field days, bringing in expert judges and providing help in a variety of ways. While the fur ranchers were grateful for this help, they looked for veterinary services and the financial assistance that the provincial Department of Agriculture offered to other branches of farming. Since the Department of Lands and Forests was unable to supply this additional help, everything dealing with fur farming eventually was transferred to the Department of Agriculture.

During 1950 two foresters, David Dyer and Bob Murray, left the employ of the Department. In the same year five members of the graduating class of that year joined the Department, namely Aubrey Brown, Donald Eldridge, Ralph Hale, Millan MacDonald and Gordon Maybee.

Among their various duties foresters were expected to encourage and help private landowners to improve the management of their woodlots.

Here and there, particularly where wooden boat building offered a market for piece products, some woodlots were managed with care; but many were neglected. This was quite understandable since the prices paid for forest products, more particularly for pulpwood, were too low to encourage or even permit the owner to expend time and money on his woodland. Furthermore, much of the work of improving woodlots took a long period before any financial returns could be expected. This delayed return on investment, coupled with the low prices, presented an almost insurmountable barrier to good woodlot management.

As already mentioned, a few landowners had pioneered Christmas tree culture in natural stands of balsam fir. Here was the obvious place to gain the interest of the small woodlot owner. In much of Nova Scotia cut-over land reseeds naturally with balsam fir. In these young stands thinning can show encouraging results even after one year, and thinning, pruning and shearing can produce satisfactory financial returns after two or three.

Thus the Department set out to encourage the cultivation of Christmas trees, not only to improve quality and increase revenue, but in the hope that, having gained the landowners' interest in short-term projects, it would be easier to persuade them to undertake work that required more time to show results.

An additional obstacle to good forest management had been the condition of the Crown lands. Neglected and abused, they set a poor example for the private landowner. Fortunately a number of areas of Crown land were now being well managed: fire barrens were being planted, young stands thinned, salvage operations carried out where land had been logged in a wasteful fashion, and mature stands were being carefully logged. Also the District Foresters were becoming familiar with logging costs and general market conditions, and could talk to the private landowners with more confidence.

During 1950 the Department purchased 44 parcels of land totalling 122,219 acres. This was the largest area added to the public holdings in a single year, bringing the area purchased up to 389,585 acres, or more than one-third of the target of 1,000,000 acres. While these lands were cut-over or burned and sometimes both, they had once been highly productive. With time and care they would support good forests again. Although the public tended to be hostile to this programme of land purchase, the Department was satisfied that it would ensure stability to the forest industry, keep substantial areas out of foreign ownership, and guarantee recreational land for the people of Nova Scotia.

The Forest Insect Survey reported the European winter moth to be causing damage to shade and ornamental trees as well as forest stands, and the possibility of bringing parasites from Europe to bring this pest under control was being studied. Damage from "birch dieback" was reported as being less severe, and a general improvement in the appearance of birch was noted. The Wildlife Biologist continued his studies on moose and deer, and started a study on beaver.

In 1951 the Extension Division was placed in the charge of Lloyd Hawboldt along with his other duties as Provincial Forest Entomologist. The programme in the schools was continued, with material supplied in popular form rather than trying to incorporate it into the school curriculum. Fire prevention literature was distributed in a booklet *The Firebug*, which dealt with the causes of forest fires, the value of the forests to Nova Scotia and what steps were being taken to protect them. Motion pictures were shown in the schools and the new film "Trees for Christmas" was being produced. This film showed areas devoted to Christmas tree culture and outlined the work involved in thinning, pruning, cutting, tieing, hauling, loading in box cars and final sale. A film library was started and put under the care of John A. Ward, another ex-service man and graduate of the Ranger School. Work was begun on two additional films, one dealing with the pulp and paper industry, the other demonstrating the proper method of skinning beaver and preparing the pelt for market.

The Crown Land Survey had now been in progress since 1934, and some of the older lines needed renewal.

In addition to the new surveys, some 250 miles of older boundary were brushed out and reblazed and 857 corner posts were reset and painted. Where stones were available—almost everywhere in Nova Scotia—stone mounds had been built around each corner post. For some reason these offered some attraction to black bears. It was not unusual to find the stones scattered and the post damaged by these animals.

On June 12, 1952, the Province entered into an agreement with the federal government to carry out and maintain an inventory of all forest land in Nova Scotia on a cost-sharing basis. While the actual groundwork would not begin until the following year, considerable preliminary work was needed, including the preparation of base maps and the taking of aerial photographs. The base maps were prepared by the Surveys Division of the Department, but the photography was contracted to a private firm. Similarly, the actual inventory work was to be carried out under contract by the firm of Belanger and Bourget of Quebec City. Richard M. Bulmer, a Department forester, worked with the contractors through the entire course of the survey, and on its completion headed up a new Inventory Division in the Department to keep the forest inventory up to date.

In 1953 the groundwork began in Cape Breton with the schedule calling for that phase of the survey to be completed by December 21, 1954. Then work would begin in the northern and eastern half of the mainland.

The Annual Report for 1952 contained an article dealing with the culture of low-bush blueberries. This was followed by a more detailed bulletin, *Blueberries: Cash From Idle Acres*. Back in 1928 legislation had been passed, popularly known as the "Blueberry Act", which provided for the leasing of Crown land to blueberry growers' associations for the exclusive use of their members. Over a period of a few years leases were issued covering thousands of acres. At that time commercial blueberry operations were confined largely to southwestern Nova Scotia, principally in Yarmouth County. Berries were hand-picked and sold locally or shipped to the Boston Market. Aside from burning every second or third year, little was done to manage or protect the crop, and in years when berries were plentiful in

Picking, sorting and loading Nova Scotia blueberries. NSGS photo.

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Picking, sorting and loading Nova Scotia blueberries. NSGS photo.

the State of Maine, it was not unusual for berries from Nova Scotia to be refused entry to the United States because of too many maggots.

A few years later, most of the berries shipped from Nova Scotia were grown in Cumberland County. In contrast to the old fire barrens which supplied the berries in other parts of the province, this was on land that originally had been cleared for farming. In Cumberland County fields were carefully burned every second year, hives of bees were placed in the fields when the bushes were in bloom to guarantee good pollination, and berries were dusted when necessary to control blueberry maggot. Competing vegetation was treated with herbicides and berries were raked and given a field cleaning before being shipped to the processing plants. Here they were given a more thorough cleaning and made ready for market. Under these conditions a single acre often produced more and better berries than were obtained from hundreds of acres of old fire barrens.

Over the years the Department of Lands and Forests had taken little interest in blueberries. Although the Department of Agriculture had on its staff a well-qualified man, he was not permitted to work with the blueberry producers. The federal Department of Agriculture maintained an experimental blueberry station in New Brunswick and Ernst Eaton from Kings County spent his summers working at this station.

Tens of thousands of acres of Crown land in southwestern Nova Scotia were being kept barren by blueberry fires—without producing many berries. Likewise a sizable area known as the Eden Lake Barrens, located partly in Pictou and partly in Guysborough counties, was being kept barren by persons unknown setting fires in dry periods. Because of this it was decided that Department personnel should become familiar with blueberry culture. If we could eliminate wild fires, reduce firefighting costs, and determine what land was suitable for blueberry culture and what land was better suited for growing trees, it would be well worth it. Largely through the efforts of Lawrence H. James, Chief Ranger for Pictou County, fires in the Eden Lake area were controlled. And, to demonstrate that this land would grow trees, we started planting pines.

R.H. Burgess took the leading role in this blueberry study and he received full support from Mr. Eaton and from the expert with the provincial Department of Agriculture. Lloyd Hawboldt wrote The Bulletin *Blueberries: Cash from Idle Acres*, and Harry Grant, Aubrey Brown, Millan MacDonald, John Semple, and other district foresters played an active role in the field. Tree planting was also started in Yarmouth County and other parts of the province where blueberry fires were a problem. In most cases this produced satisfactory results.

While the provincial Department of Agriculture up to this time had shown little, if any, interest in blueberries, and although the Blueberry Act referred to Crown land and the Department of Lands and Forests, the Department of Agriculture now complained that Lands and Forests was interfering in a field that belonged to agriculture. It so happened that the same man was Minister of both departments. He ordered Lands and Forests to desist. The expert with Agriculture was now instructed to work with the blueberry producers.

However, the brief period of interest reduced fire losses and resulted in a stepped-up programme of reforestation. A short time later, when the smoke had cleared, both departments were working amicably on blueberry projects in co-operation with the federal department.

Incidentally, in the meantime the Provincial Forester had purchased some blueberry pasture and started a sideline that eventually would occupy him in his retirement. Included in this venture was adjacent land belonging to me.

While a Scalers Act had been passed in 1945 and amended in 1950, it was only proclaimed on March 26, 1952. It came into force on April 20 that year. Shortly afterwards, largely through the efforts of R.H. Burgess, a short refresher course was offered at Shubenacadie, followed by an examination. Thus the first scaler's licenses were issued that were valid over the whole province. Before this it had been possible to go to a Municipal Clerk and obtain a license that was valid only in the municipality where it was issued. The applicant was merely sworn in as a scaler, with no examination to prove competence.

This first course and the examination were given by W.W. (Bill) McCormack, then Chief Scaler for New

Brunswick, whom we had asked to assist us. The examination was in two parts, a written test followed by a practical test scaling logs and pulpwood. After this the logs were hauled to a local mill and sawn into lumber, giving the candidates an opportunity to follow the logs through the mill and see how log scale compared with actual mill tally.

In 1953 the Hon. Arthur W. MacKenzie was appointed Minister of Highways and was succeeded as Minister of Agriculture and Lands and Forests by Colin H. Chisholm. Both men had grown up on farms, were graduates of a College of Agriculture and had served in the Armed Forces, but in temperament they were different. MacKenzie made up his mind fast, had a quick temper but cooled off rapidly. Chisholm was more deliberate. Though he did consider his Deputy of Lands and Forests to be somewhat of a problem, he never appeared to get upset. He was more politically oriented than his two predecessors, but he had considerable business experience, a keen mind, and, from his Deputy's point of view, was a very capable Minister.

Work in the Department continued as in the past with only slight changes. The Provincial Forest Nursery at Lawrencetown, Annapolis County, formerly managed under contract by A.M.O. Gold, was now owned and operated by the Department. A small nursery at Kemptville, Yarmouth County was in production along with one at Blue Mountain, Pictou County. A new nursery was being developed in the Chignecto Game Sanctuary. Fire protection continued to demand too much time and expense, but some slight progress was evident. Several small picnic sites were prepared at some of the readily accessible fire towers in the hope that by providing safe and convenient places for lunch fires, losses from this all too frequent cause of fires might be reduced. While this programme was carried out on a modest scale, it complemented the roadside table sites provided by the Department of Highways and was several years in advance of the more ambitious parks programme which would begin with the building of the Trans Canada Highway.

The Extension Division continued its usual programme showing motion pictures in schools, to service clubs and other groups, and its portable building was taken to a number of County Exhibitions and visited by some 122,000 persons. It produced and distributed the bulletin *Christmas Trees are a Crop*, which dealt with the cultivation of Christmas trees, described the insects and diseases which attacked them, offered ways to protect the trees, and proposed rules for grading. The Christmas tree industry was becoming increasingly important and some three million trees were exported that year.

The Provincial Entomologist reported that the condition of birch continued to improve, but that the spruce budworm was more active, with a severe outbreak in northern Cape Breton. The Wildlife Biologist reported a slow improvement in the number and condition of moose. The study of moose sickness was continued and evidence was found of an abnormality in the brain of sick animals. The estimated legal kill of deer totalled 43,330 taken by 59,354 resident hunters and 2,309 by non-residents—the largest kill up to that time.

The Crown land survey was continued, with seven parties in the field. A total of 71,615 acres was surveyed and monumented—52,040 acres in Cape Breton. The forestry staff was busy with a wide variety of jobs and the administration of the Small Tree Act occupied a good deal of their time. Since the Act became effective on September 6, 1946, the District Foresters had examined some 560,000 acres involving 2,502 separate operations.

The year 1954 was notable for a number of reasons. It was the year when Hurricane Edna caused such widespread damage in the forest, which tended to discredit the Small Tree Act. The legal deer kill totalled 46,389, the highest figure reached and one which will probably never be equalled. The Forest Inventory for Cape Breton was completed on schedule and aerial photographs were taken for the northeastern portion of the province covering some 9,300 square miles. In addition to the usual Crown Land Survey, a number of building lots on Crown land near urban centres were surveyed and sold. In these surveys bearings were recorded as astronomic rather than magnetic as in all previous surveys, and it was recommended that this system prevail in the future.

During 1955 the field work for the inventory in northeastern Nova Scotia was completed and aerial photographs

Pioneer Christmas tree grower Seward Feltmate of Antigonish County poses beside a natural Christmas tree on his lot (c. 1955).

for the balance of the province were taken. Production at the forest nurseries increased to 690,000 trees; 120,000 were planted on Crown land and the balance by private individuals. During the year members of the Department visited Christmas tree markets in the eastern United States. Following the visit a booklet, *The Nova Scotia Christmas Tree Trade*, was published and distributed. A second booklet, *Summer Key to Woody Plants*, describing the trees and shrubs found in Nova Scotia, was also printed and made available to the public.

At this time the Government was trying desperately to attract new industry to the province, particularly in the eastern part where ailing steel and coal industries were causing serious problems. As there were extensive areas of Crown land in that part of Nova Scotia, the possibility of a new pulp and paper mill appeared to offer a partial solution.

The Hearst Corporation operated a small groundwood mill at Sheet Harbour, Halifax County and owned 100,000 acres of woodlands on the East and West rivers, Sheet Harbour. That company also had a newsprint machine in storage somewhere in the State of Maine. It proposed to build a one-machine newsprint mill at Sheet Harbour on condition that it receive a long-term lease of a large area of Crown land in Halifax and Guysborough counties at a price attractive to the Company. Lengthy negotiations ensued but no final agreement was ever reached.

Other companies were invited to visit the province. A number came, but one by one they appeared to be frightened off by the prospect of paying municipal taxes on leasehold land. Eventually J.R. Bigelow, Deputy Minister of the Department of Trade and Industry, contacted a representative of the Swedish firm of Stora Kopparberg and negotiations with that company commenced.

The Scott Paper Company, having acquired the extensive freehold lands of Hollingsworth and Whitney, indicated an interest in building a sulphate pulp mill in Pictou County. Negotiations appeared to be progressing favourably, and early in 1956 the Minister of Lands and Forests, accompanied by the Minister of Trade and Industry, the Deputy Minister of Lands and Forests and the Provincial Forester, travelled to Philadelphia and Chester, Pennsylvania in high hopes of signing an agreement. Scott officials, together with consultants including Dr. John Bates of Sackville, New Brunswick, spent a morning discussing the pros and cons of the proposal. Just when it appeared that an agreement would be signed, the president of the company decided that due to current market conditions and because the company had just expanded into British Columbia, the Nova Scotia project would have to be deferred for possibly 10 years.

On October 30 a Provincial Election was held, resulting in a change of government. Robert L. Stanfield succeeded Henry Hicks as Premier. The new Conservative Government took office on November 20, 1956, and Mr. Hicks turned over his correspondence with the various pulp companies to Premier Stanfield so that negotiations could continue.

On the day the Government took office R. Clifford Levy succeeded Colin Chisholm as Minister of Lands and Forests. Unlike the two previous Ministers, Levy was a lawyer and he did not hold the portfolio of Agriculture. An entire change of government was a new experience. The new Minister and some of his colleagues were suspicious of the Deputy and staff, but the new Premier was a gentleman in every sense of the word, and consulted with his officials freely and in a friendly manner.

The District Foresters in the new government were as follows:

Harry A. Grant	Yarmouth, Shelburne and Digby Co.
Robert K. Allen	Annapolis Co.
John C. Currie	Kings Co.
Aubrey D. Brown	Cumberland Co.
Gordon Maybee	Colchester Co.
Millan MacDonald	Pictou and part of Halifax Co.
Angus MacMillian	Antigonish Co.
Allister Fraser	Inverness & Victoria Co.
Murdoch A. Ferguson	Richmond & Cape Breton Co.
Ralph Hale	part of Guysboro Co.
John Semple	part of Guysboro Co.
Ralph Redmond	part of Halifax Co.

Lloyd Hawboldt was still Provincial Entomologist and in charge of Extension, and Denis Benson was Provincial Wildlife Biologist.

The Rangers in charge of counties—or in some cases municipalities or electoral districts—now known as Provincial Forest Rangers were:

DISTRICT 1	Stanley R. Jefferson	Lunenburg Co.
DISTRICT 2	Gordon Minard	Queens Co.
DISTRICT 3	J. Arthur Smith	Shelburne Co.
DISTRICT 4	Chester E. Gray	Yarmouth Co.
DISTRICT 5	Col. Alfie V. Banks	Digby Co.
DISTRICT 6	Charles F. Whitman	Annapolis Co.
DISTRICT 7	C. Edward Lloyd	Kings Co.
DISTRICT 8	Albert F. Crowe	Hants Co.
DISTRICT 9	Norman M. Trueman	Cumberland Co.
DISTRICT 10	Raymond T. McCabe	Colchester Co.
DISTRICT 11	Lawrence H. James	Pictou Co.
DISTRICT 12	Ronald Chisholm	Antigonish Co.
DISTRICT 13	Austin W. Letcher	Inverness Co.
DISTRICT 14	S.A. "Sandy" Matheson	Victoria Co.
DISTRICT 15	Michael Woodfine	Cape Breton Co.
DISTRICT 16	John L. Landry	Richmond Co.
DISTRICT 17	Alex W. Chisholm	Municipality of Guysborough
DISTRICT 18	Archibald Hingley	Municipality of St. Mary's
DISTRICT 19	John J. Jones	Electoral District of Halifax East
DISTRICT 20	H. Foster Cruickshank	Electoral District of Halifax West

In 1957 the Department purchased a Kelsh Plotter—used in transferring air photo detail onto maps stereoscopically—and a number of precision theodolites, a kind of transit used for measuring horizontal and vertical angles. These instruments were required to carry out the necessary horizontal control that would ensure accurate mapping. Since this marked the beginning of a new era in the Surveys Division, it is perhaps a good time to review briefly the work of that division, and some of the personnel involved.

At the start of the Crown Land Survey in 1934, V.P. Harrison was the lone surveyor in the field, but sometimes he was assisted by D.W. Hudson and me. The equipment used by a survey party of that day included a staff compass, a one-chain (66-foot) steel tape, chainage pins, a notebook, and axes.

The following year Rusty March headed up a second crew. In 1936 Joe Archibald was engaged as a student, to be followed shortly by John D. MacIntosh and Con Richard. Roy Schofield joined the Division in 1938, and for a good many years this group carried on without any additions. J.D. MacIntosh unfortunately lost his life in the Queen Hotel fire and was sorely missed as he was a good surveyor, an excellent draughtsman and a fine man.

At that time the Department did own one ancient transit, but it was seldom used, and the survey continued with compass and chain for many years. It might be pointed out that surveying the Crown lands was almost entirely a matter of retracing old grant boundaries. Since all had been run with a compass, a staff compass was quite suitable. The surveyors employed were all skilled at the work, which required an experienced woodsman able to recognize old blaze marks—often overgrown by years of annual rings—and to retrace lines, many of which had been run in the late 1700s and early 1800s. Much of the land had been cut over and burned, and old blazes and rock monuments were sometimes few and far between.

With the opening of the Survey School, first at Halifax and then at Lawrencetown under Major Church following the end of World War II, a new breed of surveyor became available. The first graduates had served in the Armed Forces, and their theoretical training was superior to that of the older surveyors, but they lacked the experience and skills required to retrace the old lines. Under the guidance of the older men, however, they soon learned these skills. Among the first graduates to join the Department were Bert Robertson and Walter Servant in 1947, to be followed shortly by Hoyse Cameron, Ernie Boehk, and Ronald Chisholm.

A survey party in the years under review was a small closely knit body, and almost next in importance to the party chief was the cook. Over the years a goodly number of cooks were employed, including Markie Dean, Bert Moser, Wilson Byers and Billie Gale. Possibly Ralph Hale should be included, for as a young forester he would fill in for an absent cook or, for that matter, for any other member of the crew who might be missing. Not every cook was willing to work in a tent and move to a new location every few weeks, but those who were willing to put up with these inconveniences tended to return year after year.

The usual crew consisted of a compassman, three axemen and two chainmen, and after the first year it was usual to have two crews in each party. At each campsite would be a cook tent where the meals were prepared, the men ate, and the cook slept. There was a sleeping tent for the men, and a third tent served as office, storeroom and sleeping quarters for the party chief.

Like the cooks, a few axemen and chainmen returned each year. But many would stay for only one season, and some left as soon as the party moved from their home territory. Most of the men were young, but Charlie MacDonald of East River, Sheet Harbour, a noted woodsman and hunter, still worked as a chainman when nearly 70. Frank Johnson from Cumberland County, one of the better axemen, returned year after year until into his late sixties—and when the weather was too wet to work he would go fishing.

In common with most of his peers, Johnson was a teller of tall tales. Whenever someone else told a story he prided himself on being able to go one better. When starting one of his tales he usually began, "Now this is a true story," and often he would specify the year in which the event took place. One time, attempting to make sure that everyone knew the exact date, he explained, "That was the year the hens laid in the barn." Eventually Rod Weir of Stillwater, Guysborough County joined the survey—and nearly broke Johnson's heart by topping every story he told.

Weir was also a champion spitter. Many of the men chewed tobacco and ejected the juice in a thin solid stream, but Weir had perfected an original technique which sent out a spray of tobacco juice in an arc of almost 180 degrees.

Among the younger men who returned for a number of years might be mentioned Dave Read of Guysborough County, Johnnie Cameron of New Chester, Lester Roast of Halifax County and the Rice brothers from Bear River who were good woodsmen and excellent canoemen. Bob Campbell, of Dartmouth and later Lunenburg, started as a

Crown land survey parties in the 1930s shifting camp (top) in Digby County, where numerous lakes made canoe travel easy; and (bottom) by truck at Shortts Lake, Colchester County. (Left to right) Tom Harrison, truck driver, unknown, Frank Johnson and Elmer O. Mason, others unknown. Farm wagons with oxen or horses were also used.

The author with cook James Begin at a Lands and Forests camp, Stanley, Hants County, 1958.

student and, after becoming a successful high school teacher, continued to rejoin the survey during the school vacation.

Moving camp was sometimes an interesting operation. Often a farm wagon and horses were hired. In southwestern Nova Scotia many moves were made by canoe. If the move was entirely in the woods it was relatively simple, but on longer moves through settlements where rum was obtainable, it was a different story. Nothing serious ever happened, but when the men related their experiences, nothing was lost in the telling.

When sufficient boundary line had been completed, the foresters moved in to cruise the enclosed Crown land. A cruising party consisted of a cruiser, a compassman, and one or sometimes two calipermen. The cruiser directed the party and kept the notes, while the compassman, using a pocket compass to keep on a predetermined course, dragged behind him a two-chain steel tape. The calipermen measured the trees on a strip half a chain wide, or 16 1/2 feet on either side of the tape, which formed the centre line of the strip. All trees in this strip that were larger than four inches in diameter at breast height were tallied in inch-classes by species. On his map sheet the cruiser noted timber types, age classes, site quality and topographic features. On larger blocks the parallel cruise lines were usually run at quarter-mile intervals, but on smaller lots they often were spaced 10 chains apart. Aerial photographs were used to help locate the cruise lines, and were carried in the field to aid in determining type boundaries. Initially Dave Hudson and I were the only cruisers. Eventually Stewart MacDonald was put in charge of this work, and carried on until he enlisted in the Air Force.

Cruising was sometimes carried on in winter as well as summer, but the surveyors mostly spent the winter months compiling and plotting their notes and preparing for the next season's work. Tracings were made of the grants which formed the boundaries of the ungranted lands, and the original surveyors' returns were studied for information helpful in locating the old grant boundaries. In later years the Surveys Division would acquire sophisticated instruments that would render the old methods obsolete; but that was still some time in the future.

Late in 1957 the Forest Inventory was completed and Lloyd Hawboldt and Dick Bulmer prepared the final report for publication. This report was published in March, 1958 in a book entitled *The Forest Resources of Nova Scotia*.[6]

During the course of the inventory Dick Bulmer was seconded to the contractors. On the completion of the report, as mentioned earlier, he was placed in charge of a new section created for the purpose of carrying on a continuous inventory. At first we intended this new inventory to be carried out over a 10-year cycle, but it soon became evident that a shorter period was preferable, so we shortened the period to seven years.

Early in 1958 a second Wildlife Biologist joined the Department. Neil van Nostrand, a graduate of the University of Guelph, was engaged to carry out a study on ringnecked pheasants, particularly in the Annapolis Valley. Shortly afterward the Minister hired Clarence Mason and placed him in charge of the Wildlife Division. Naturally enough Denis Benson, the Provincial Wildlife Biologist, until this time head of the Division, was unhappy to have a man with no scientific training placed over him. In August of that year he resigned and accepted a position with the Canadian Wildlife Service.

As mentioned earlier, Mason had worked for the Department and had been dismissed on political grounds in 1933. He had studied theology, was a fluent speaker, and had done some preaching but had not been ordained. For a number of years he had been a lumberman and he was an ardent hunter and fisherman. Mr. Levy made it fairly evident that he would have liked to have Mason as his Deputy, and Clarence was strongly in favour of the idea, but the authority to dismiss or appoint a Deputy rested with the Premier, and the Premier took no action.

Negotiations with the Swedish firm of Stora Koppaberg had continued after a change in government and finally were brought to a successful conclusion. On March 3, 1958, the Nova Scotia Pulp Ltd. Agreement was passed. Under the terms of this agreement the company undertook to build a sulphite pulp mill at the Strait of Canso, on condition that the Province make available a million acres of Crown land on Cape Breton Island and in the three eastern counties of Pictou, Antigonish, and Guysborough. Later this area was substantially increased. In order to provide this million acres it was necessary for the Province to obtain the release of lands in Cape Breton held under long-term lease by Oxford Paper Company and Bowater Mersey Paper Company. Once again a Nova Scotia government had to pay dearly for a lease issued by a former government for the princely sum of one cent per acre per year.

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[6] Richard M. Bulmer, Lloyd S. Hawboldt, *The Forest Resources of Nova Scotia* (Halifax: N.S. Dept. of Lands and Forests, 1958).

While the Department officials were sorry to see all Crown land in the seven counties tied up in a long-term lease, they realized that depressed economic conditions at that time demanded drastic action. These same officials in their programme of land purchase had been building up the Crown holdings, knowing full well that as soon as this land became attractive, it would be turned over to some large private company. In some parts of the province necessary action had been taken to guarantee that some Crown land would remain available to supply, at least in part, the needs of local sawmills, and purchases were continued in the seven counties with the object of having some land free of the Nova Scotia Pulp Ltd. Agreement.

By 1959 the federal government was interested in having camping and picnic parks developed along the Trans Canada Highway, and was offering financial assistance to the provinces to this end. A meeting was held in the Premier's office, and it was decided that Nova Scotia would take part in the proposed development. It was agreed that the Department of Lands and Forests would undertake this work, and after the passing of the Provincial Parks Act on March 26, 1959, the initial steps were taken. Unfortunately there was no suitable Crown land bordering on the Trans Canada Highway, and it was necessary to search for and purchase the needed properties.

Although the federal government had suggested that 30 acres was the minimum size considered suitable, it soon became clear that this was much too small and that additional land had to be purchased. Before long this programme proved so popular that every MLA was clamouring for a park in his constituency, whether along the Trans Canada Highway or not. Further meetings were held in the Premier's office, and plans were formulated to have a least one park in every county, and more in the thickly populated areas. The

Five former directors of the Department, 1966. From left to right: Earl Atkins (Parks), Merrill Prime (Wildlife), Gordon Maybee (Forestry), Bert Robertson (Surveys), Lloyd Hawboldt (Extension). Bob Jones photo.

L. S. Hawboldt (left) and Russian forester Simon Koskjukovits cruising the Antrim Demonstration Woodlot in the early 1960s. Koskjukovits helped develop the Department's first softwood yield tables.

Premier issued instructions that choice sites be purchased and that a land bank formed for future development. In addition to land fronting on the highways, shore frontage, both on lakes and on salt water, was examined and a number of properties purchased.

Earl Atkins, a forester who had come with the Department from the Federal Forest Service, headed up this new Parks Division. But due to some political problems R.L. Seaborne, recently retired as Woodlands Manager and Vice President of Bowater Mersey Paper Company, was asked to take over the job on a temporary basis with Atkins as his assistant. This arrangement lasted for several years until Seaborne retired and Atkins was again placed in full charge.

In time a number of properties were donated by public-spirited citizens, including the Dennis family of Halifax, Colonel Laurie of Oakfield, R.A. Jodrey of Hantsport, Mrs. MacLennan of Sydney, and Senator Welch of Wolfville.

In July of 1959, R.C. Levy was appointed a County Court Judge and Edward D. Haliburton replaced him as Minister of Lands and Forests. Mr. Haliburton was a new and refreshing type. Born in Newfoundland, he had gone to the same school with Joey Smallwood, had lived in Cape Breton and was on the ice at Baddeck as a boy when J.A.D. McCurdy first flew the Silver Dart. He had attended Dalhousie University, then served in the Royal Navy during World War I. A graduate of Kings College, Windsor, Nova Scotia, he held an M.A. Degree in Economics and had worked as a newspaper reporter in Halifax and the United States and then purchased a farm at Avonport, Kings County. He was elected as a member for Kings County in 1956 and had previously served as Minister of Agriculture.

Mr. Haliburton was an avid reader and his Deputy found that he needed to study the forestry literature that arrived with every mail in order to try to answer some of the questions asked. Like at least two of his predecessors he found me somewhat of a problem, but relations were cordial and he was always ready and willing to discuss any issues which arose. Like any other human he had his weaknesses but his most serious fault was that he smoked White Owl cigars. The Minister of Finance didn't think highly of White Owls either, and used to ask, "Ed, do you have to smoke that old rope?"

For a number of years several blocks of Crown land had been designated as Management Units, where Department personnel carried out a wide variety of work. Most of this land had been heavily cut over or burned but was gradually restocking. Initially access roads were built, treeless areas were replanted, young stands thinned, and stand improvement and salvage operations carried out. Work was first started in the Chignecto Game Sanctuary in Cumberland County, followed by the fairly large block of Crown land lying roughly between Stanley and Walton in Hants County. Next came the so-called Lake George land in Kings, Annapolis and Lunenburg counties, purchased from Hollingsworth and Whitney a few years before that company was taken over by Scott.

A relatively large area had been reforested in the Eden Lake Barrens in Pictou and Guysborough counties, but unfortunately this land was turned over to Nova Scotia Pulp Limited under the terms of their agreement. At Eden Lake Millan MacDonald, Lawrence James and others had built roads and planted trees before the land was leased to the pulp company.

The Kedge Lake Management Unit in Queens County was started by District Forester Murray Anderson in 1958. Anderson prepared a fairly detailed report, giving past history, outlining work in progress and a schedule of work to be carried out in the future. Anderson resigned in 1960 and the management of the unit has been under Lyndon Gray ever since.

Bob Burgess had been active in the initial stages in Chignecto, ably assisted by the sanctuary wardens and by several rangers. Eventually Aubrey Brown was moved to Cumberland County as District Forester and given charge of the project. Ed Boulter, one of the more experienced foresters in the employ of the Department, was in charge at Stanley, assisted at times by Charles MacKenzie, Ralph Pick and others. This area is unique in that the land for the most part is flat and supports an unusual mixture of good quality red pine and black spruce, with some excellent red oak, and, by Nova Scotia standards, some extremely large poplar. Bob Burgess again played the leading role at Lake George on the Annapolis-Kings block, assisted by Ralph Pick, Les Corkum and others.

A number of smaller areas comparable to farm woodlots were also developed. Gordon Maybee had initiated work at the Antrim Woodlot in Halifax County, and then turned it over to David Dwyer, an extension forester—not to be confused with David Dyer—who continued the work and kept detailed records for many years. In Yarmouth County H.J.A. Grant managed several small areas, including a low-bush blueberrry lot at East Kemptville. Angus MacMillan developed a woodlot at Crystal Cliffs, Antigonish County and started a demonstration Sugar Bush at Giant's Lake, Guysboro County. The latter had been proposed by Bob Murray before he left the employ of the Department.

With the exception of Eden lake, all these areas from the very start produced some merchantable material, including sawlogs, pulpwood poles and piling, firewood, blueberries and maple products. They provided a training ground for Department personnel, gave considerable employment to local residents, and soon were providing an example of good forest management.

It was planned that at least one management unit could be established in each county, and with this in mind attempts were made to purchase land in counties where all Crown land had been leased to the pulp companies. It was further hoped that forest land under good management with an adequate road system would be relatively free of fires, which would reduce firefighting costs and make money available for more productive work.

As a result of haphazard cutting in the past, resulting in forests with a high percentage of balsam fir, many areas are susceptible to budworm and other destructive agents; but with better management much of this damage and loss might be reduced in the future. While the forester very often thinks only about growing trees of merchantable size and quality in the shortest time possible, the Department of Lands and Forests is also responsible for the development and administration of park and picnic sites and for the protection and management of game, and fur resources. Occasionally there is some little conflict of interest. Fortunately the differences to date, at least within the Department, have not been serious. The draining of wetlands, the destruction of beaches and other land necessary for wildlife is, however, of constant concern. An employee of the Department of Lands and Forests, then, must also keep in mind the public's demand for multiple use, and make plans to manage the public lands in a manner that will meet any reasonable need.

The revenue and expenditure of the Department have been shown for the year 1949, and since that time the fiscal year had been charged to the period from April 1 to March 31 in the following year. This was done to bring the Province's fiscal year in line with the fiscal year of the federal government.

Revenue from the year ending March 31, 1960, amounted to $614,496. Of this total the sale of game licenses provided $307,861, while stumpage from Crown lands totalled $158,179. In years to come the revenue from stumpage should be greater than all other revenue combined, but for the present the real value of the Crown land is obscured because low stumpage dues have been used to entice pulp companies to build mills in the province.

For the same period the ordinary expenditures were $1,338,486. Of this total $164,455 had been provided by the federal government, leaving the Province's share at $1,174,031. Of this, salaries amounted to $456,650; capital expenditures for the same period were $484,288. Some 190,000 acres of Crown land were surveyed, but this relatively large area was possible only because much of the work entailed retracing the boundaries of the so-called Big Lease, boundaries which had been kept in fair shape by the Oxford Paper Company. Twenty parcels of land having an area of 4,764 acres were purchased and the area of land reconveyed to the Crown now totalled 585,522 acres.

Under the Federal-Provincial Agreement for the construction of picnic areas and campgrounds, development work had now been carried out in Cumberland, Guysboro, Halifax, Lunenburg, Pictou, Shelburne, Cape Breton, Inverness and Victoria counties. Under the same agreement access roads and trails had been built in Lunenburg, Queens, Shelburne, Yarmouth, Kings, Hants, Colchester, Cumberland, Pictou, Guysborough, Halifax and Victoria counties. Some of the larger road projects in Yarmouth and Shelburne were in the charge of Gus Porter, a war veteran from River Hebert who started with a work crew in the

Chignecto Sanctuary and showed marked ability in building woods roads. But most projects were supervised by District Foresters.

Six tree nurseries were in operation, with the main nursery at Lawrencetown, Annapolis County, under the management of R.K. Allen, a former officer in the Canadian Forestry Corps and a former District Forester. A seventh small transplant nursery was started at Upper Manchester in Guysborough County by District Forester John Semple. A total of 205,000 trees was outplanted on Crown land and 74,000 on private holdings.

One hundred and ten cutting operations were inspected under the Small Tree Conservation Act covering a total area of some 17,400 acres. Two hundred and fifty-four forest fires were extinguished—but not before they had burned an area of some 2,575 acres.

A study of predatory animals as they affect the game of the province was started by Dr. Harrison F. Lewis, former head of the Federal Wildlife Service, and four deer checking stations were maintained by Department personnel during the hunting season for biological research. Schools for Junior Guides under the direction of A.F. "Bert" Crowe were again held at Stillwater, Guysborough County, Beaverdam, Shelburne County and Kedgemakooge, Annapolis County.

The European winter moth continued to extend its range, attacking red oak, elm and apple. Studies were continued on the biological control of the insect, including the establishment of introduced parasites and the effects of disease. Spruce budworm populations were negligible, but the balsam needle midge was general throughout the province, causing damage to Christmas trees.

The Extension Division continued its usual programme through the press, radio and television, as well as by posters, leaflets and Smokey Bear material. Films were shown in the schools by John Ward, Lawrence Levy and Munroe "Bud" Withrow, and a new film entitled "Wildlife Rendezvous" was produced for the Department by the Nova Scotia Film Bureau, under the direction of Margaret Perry and Ned Norwood.

Twenty-seven gun and rifle clubs helped the Department conduct a safe hunting programme, opening their premises to the public and supplying instructors to demonstrate safe handling of firearms. Big game hunters purchased 55,127 licenses and 29,597 deer were reported taken, with the estimated kill exceeding 31,000.

A. F. "Bert" Crowe (left) instructs a hunter in the proper use of firearms. Mr. Crowe also directed Junior Guides' Schools each summer.

The Sixties

The year 1960 was in many respects one of progress, but also one with its share of frustrations. It proved to be a bad year for fires, with a total of 605 burning 21,266 acres; the largest of these was near Indian Fields in Shelburne County. For a time this fire burned out of control, and the Armed Forces were asked for assistance. Service personnel, with helicopters, fixed-wing aircraft and other equipment, along with the Department's staff, aircraft, bulldozers, trucks, motor pumps and hand equipment finally succeeded in bringing the blaze under control. While this proved to be a very costly exercise, valuable experience was gained which proved useful in later years. During the fire a landing strip was hastily built at Indian Fields and fire breaks and roads were bulldozed which also were used when crews moved in to reforest the burned-over land.

Before the end of the year a management plan was completed for 78,000 acres of Crown land in the Chignecto Sanctuary and work there could now proceed in a more orderly fashion.

One hundred and fifty thousand trees were planted on Crown land in the Spring, with 48,000 in the Fall. Some 50,000 were provided for private land.

The Parks Division was busy and work proceeded at Laurie Park, Halifax County; Coldbrook, Kings County; Saltsprings, Pictou County; Wentworth, Cumberland

The Beaches Protection Act came too late for Silver Sands, near Cow Bay, a favourite beach for Halifax-Dartmouth residents until it was destroyed by unauthorized sand removal. Photo courtesy R. H. Helpard.

Foresters Ed Boulter (left) and Lee Bushell examine red pine plantation, 1967. Bob Jones photo

County and Whycocomagh, Inverness County. Work also continued at Smiley's Interval, Hants County. The first stage of this park was opened to the public in July by the Honourable E.D. Haliburton with Mr. Smiley, the former owner, in attendance.

The Beaches Protection Act, which had been passed in the previous session of the Legislature, was giving the Department considerable trouble. For many years contractors had been removing sand and gravel from beaches without any interference, and now were resentful and belligerent when told that their operations must cease. Unfortunately in many locations this action had been too long delayed and irreparable damage had been done.

In August Dr.Donald Dodds,a wildlife biologist who had been working in Newfoundland, was engaged to continue the studies on white-tailed deer initiated by Denis Benson. Neil van Nostrand also continued his study on ringnecked pheasant.

The Nova Scotia Film Bureau turned over to the Extension Division a new film, "Trees in The News", which the Department had earlier requested. It told the story of newsprint, commencing with the cutting of trees in the forest and describing the manufacture of paper, the printing of newspapers and finally the delivery of a daily paper by a newsboy. In co-operation with a number of gun clubs, safe hunting instruction was given including safe handling of firearms, the use of compass, map reading and aids for survival if lost in the woods. Schools for young guides were held during the summer at Stillwater, Guysborough County; Rotary Park, Sydney; Beaver Dam, Shelburne County and at Hibernia, Queens County, with a total of 139 boys attending.

Some 31,567 acres were reconveyed to the Crown, and total purchases to the end of the fiscal year amounted to 618,672 acres.

Late in the summer the Province purchased back from the Oxford Paper Company the remaining land held under the terms of the 99-year lease. This land, along with other Crown land in the seven eastern counties, was committed to Nova Scotia Pulp Limited, which was building a mill at Port Hawkesbury. At that time the coal mines were being phased out, the steel mills were ailing and the Provincial

Government was desperate to find employment for people in eastern Nova Scotia. The Crown lands appeared to offer the only solution—so once again Crown stumpage was leased for a long period at prices below its true value.

With fire protection still a prime concern of the Department, the number of fire equipment depots had been increasing. By 1961, 11 were in operation. These were located at Shubenacadie, Musquodoboit Harbour, Lewis Lake, Stanley, Chignecto, Blue Mountain, Upper Manchester, Kemptville, Lawrencetown, Kentville and Coxheath. In addition 28 fire towers were in use, and the aerial patrol continued to provide an indispensable service.

Production in the forest nurseries was increasing gradually; 254,700 trees were planted on Crown land and 173,000 on private holdings.

The inventory of Crown lands continued, covering 112,000 acres in Kings and Annapolis counties and 8,000 acres in Halifax County, and plans were underway to bring all Crown land under more systematic management.

The micro-filming of all Crown grants and leases was completed. One set of films was retained in the Halifax Office, and, as a safety measure, duplicate sets were sent to the Provincial Archives and to the Registry Office in Sydney. The Surveys Division completed 60,000 acres of Crown land; the area surveyed and monumented now totalled 2,776,745 acres.

Early in 1961 a Federal/Provincial Agreement was signed to provide work in the woods in Cape Breton and Cumberland County for displaced coal miners. About 150 men were employed, cleaning the sides of public highways, cutting woods roads, thinning young stands, and working in Provincial Parks. In addition a small group from Joggins, River Hebert and Springhill worked in the Chignecto Sanctuary. Since these men had previous experience in the woods as well as in the mines, they were not faced with the problem of adapting to an unfamiliar type of employment. Several showed so much ability and ingenuity that they were given full-time appointment with the Parks Division. The larger group in Cape Breton were fine men, but they had no previous woods experience, and probably would have benefited more from retraining in some of the mechanical trades.

In September Laurie Park was officially opened by Mr. Haliburton. Colonel and Mrs. Laurie, the donors of the land, were present along with some other members of their family. A granite slab had been erected at the entrance to the park with a bronze plaque in memory of two of Colonel Laurie's brothers who had died on active service, one in the Boer War and the other in World War I.

The new pulp mill at Port Hawkesbury was completed on schedule and had its first trial run in October. This mill provided much needed employment and a market for considerable quantities of wood which until now had gone to waste.

Late in the year V.P. Harrison retired as Director of Crown Lands and was replaced by Roy M. Schofield, a land surveyor who had been in the employ of the Department since 1938. Though Mr. Harrison had relinquished his former post, he was retained for several years sorting out old files that had been in storage for many years. During 1961 two additional biologists were added to the Wildlife Division, Merrill Prime in May and Fred Payne in October.

The Provincial Entomologist reported that a combined attack of spruce budworm and hemlock looper were causing considerable damage on the Cape Breton Highlands—but the area affected was small compared to what it would be in the near future. The Extension Division carried on its usual work with special emphasis on films shown in the schools, and this programme was under the direction of John Ward assisted by Lawrence Levy and Munroe Withrow.

Late in the fall Eldon Pace, Superintendent of the Wildlife Park, arranged with officials in Maine to have some fisher live-trapped during the winter of 1962 and brought to Nova Scotia for release in hopes that they might reduce the number of porcupine, which were causing serious damage, especially in young plantations. Early in 1962 the animals were brought to Nova Scotia. After being held in quarantine of a period of 60 days they were released in the Liscomb Game Sanctuary and on the so-called Garden of Eden Barrens.

In January Dr. Harrison Lewis completed his study on the role of predators and their effect on the other wildlife of the province. While some of the sporting fraternity tend to regard predators as all bad, wildlife managers recognize that they play an important role and have a place in the scheme of nature.

The Wildlife Park at Shubenacadie was becoming increasingly popular; Mr. Pace reported that by year's end it had been visited by 181,000 persons. Work on Provincial Parks continued, with eight campsites and five picnic parks open to the public.

The forest nurseries provided 280,500 trees for Crown land planting and 149,000 for private landowners. Some of the earlier plantations, both on Crown and on private land, were becoming impressive. On Crown land the plantations in Chignecto and at the Garden of Eden Barrens were especially notable, and on private land the plantations started by Andrew MacKay at Lorne, Pictou County were worth honourable mention.

The Crown Land Inventory was continued, with 120,000 acres in Shelburne and Colchester counties completed. It was now possible to prepare management plans for 46 per cent of the unalienated public holdings. The boundary line survey enclosed an additional 50,740 acres, giving a new total of 2,827,485 acres surveyed and monumented.

During 1963 the Wildlife Division devised an aging technique for beaver, and experimental areas were established in Cumberland and Queens counties to study reproduction and feeding habits. As part of the study, jaw bones and reproductive tracts were collected. A further study was initiated on the interrelationship of moose and white-tailed deer, and deer studies were continued with special emphasis on wintering conditions.

The Provincial Entomologist reported that the parasites introduced to control the European winter moth were now well established, and that in the areas of older infestation the damage had been reduced. During the year members of the Extension Division showed motion pictures 1,200 times to some 130,000 persons. Considerable time also was spent with woodlot owners, promoting the production of quality Christmas trees and the improvement of woodlots in general. Initially a few woodlot owners had commenced the cultivation of Christmas trees, and the Department, recognizing the potential offered by this short-rotation forest crop, carried out a number of studies to learn better methods of managing and marketing this product of our woodlots. Lloyd Hawboldt and Bob Murray were two of the first to engage in this work, and were followed by Thomas G. Ernst, Leroy Wright, Lyndon Gray, John Semple, Les Corkum and others.

Four schools for junior guides were held, with 146 boys in attendance, and again the Department was assisted by several professional guides. For the first time all boys took the National Rifle Association Course.

A total of 3,122 acres was purchased for forest reserve, 385 acres for park and picnic sites and 2.5 acres for a new fire equipment depot.

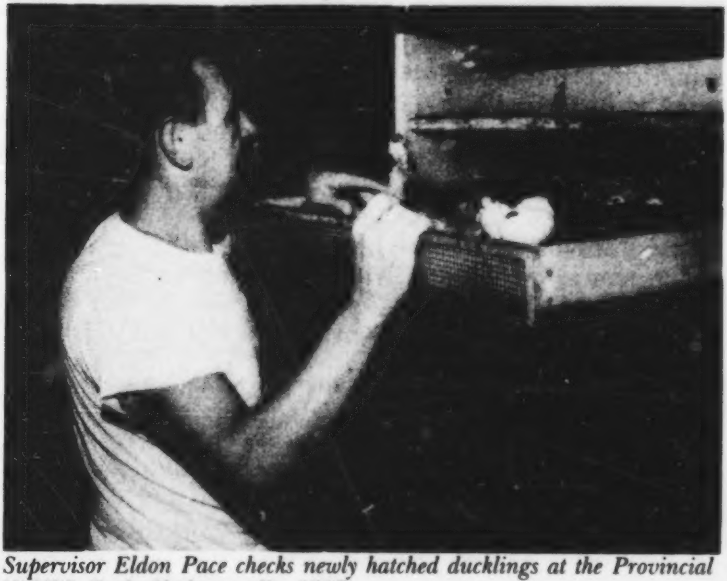
For some little time the Province and the Federal Parks Branch had been discussing the possibility of another National Park in Nova Scotia. After several possible sites had been examined it was announced by the Premier that an area had been chosen that would include Kedgemakooge Lake and surrounding country.

The lumbermen of the province had been asking repeatedly that the Department employ a person who could assist in upgrading sawmills and training sawyers, and a suitable man was found in the person of C. Edward Lloyd, the Ranger in charge of fire protection in Kings County. Ed Lloyd was an experienced sawmill man, and early in the fall of 1963 he was relieved of his ranger duties and assigned full-time to visit sawmills, and help the owners make needed adjustments.

In 1964 the aerial patrol which had been operated by private contractors was taken over and managed by the Department. At this time all planes were on floats but in winter one or more were equipped with skis. The main base was located at Waverley, Halifax County and the Department owned two Cubs and one Cessna and had the use of the Power Commission's Beaver which could be fitted with tanks for dropping water.

It was necessary to engage a qualified staff, and the Department was fortunate in having the advice of E.C. Dauphinee who had flown on fire patrols with Orville Pulsifer Sr., and who now flew the Beaver for the Power Commission. Gordon Steeves, a World War I pilot who had also served in the R.C.A.F. during World War II, was

Lands and Forests pilot Gordon Steeves prepares to leave base on a fire patrol about 1965. Bob Jones photo.



Supervisor Eldon Pace checks newly hatched ducklings at the Provincial Wildlife Park, Shubenacadie, 1967.

engaged as Chief Pilot, and a number of men were available who with Dauphinee had first learned to fly at the Halifax Flying Club. Among these were Henry Gates and Gordon Gray—now experienced bush pilots—George Johnson, and others.

Freeman Hirtle, also from the Halifax Flying Club and ex-R.C.A.F., was engaged as engineer. No mother hen was ever more careful of her chicks than was Hirtle with the planes in his charge, and it was interesting to hear his conversation with pilots when they returned to base. If he was displeased with Steeves he always addressed him as Wing Commander. One evening when Steeves returned from a flight to Cape Breton he was greeted thus: "Wing Commander, you've been in salt water."

"No," replied Steeves, "I was in the Bras D'Or Lakes."

"Well, the Bras D'Or Lakes are salt."

"The water in the Bras D'Or Lakes isn't salt," said Steeves. "I'd put water from the Bras D'Or Lakes in my whiskey—provided I had enough whiskey."

During the year 562 fires burned 8,739 acres. Losses would have been much greater had it not been for trained standby crews, aircraft, tank trucks and more woods roads, which made it easier to get to many fires.

In April Clarence Mason, Director of the Wildlife Division, died after a lengthy illness. Clarence was an interesting character who, when it came time to leave this earth, looked death in the face without a whimper. All through life he had enjoyed himself, and he seemed to have a good time in the process of leaving. During his last year he spent periods in the Halifax Infirmary, then owned and operated by the Sisters of Charity. In the evenings the young nurses would congregate in his room to hear the stories he delighted in telling.

One day, overhearing a woman upbraiding the young nurses, he came to their defence: "Nurse, you don't have to be cross at these little girls; they're doing the best they can." The woman, none too pleased at this interference, replied in a thick foreign accent, "I'll have you know I'm not a nurse; I'm a doctor."

"That so?" said Clarence.

"Yes, said she, glaring at him.

"Well, how was I to know?" says Clarence. "You don't have a sign on you. Where you from, anyway?"

"I'm from Egypt."

"Oh, are you—can you belly dance?"

Fortunately for Clarence the doctor took a liking to him; and they discussed belly dancing at some length.

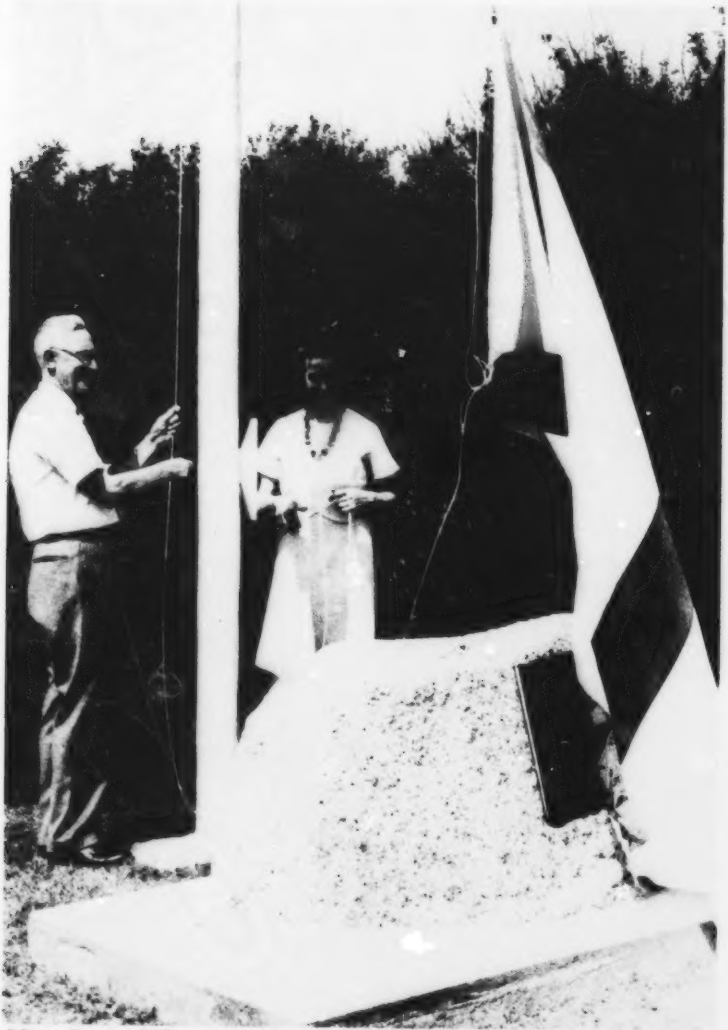
Following Clarence's death Dr. Donald Dodds was appointed Acting Director, and carried on in that position until he accepted an appointment at Acadia University.

During the summer of 1966 Mrs. F.W. Hilles presented the Department with a very valuable property at Paradise, Annapolis County on the south side of the Annapolis River. The property included some 400 acres of woodland, a considerable area of farmland, together with three valuable houses and out-buildings.

Production in the forest nurseries had increased and 1,025,000 trees were supplied for outplanting, with 742,150 planted on Crown lands, 2,500 in Provincial Parks and 280,350 given to private landowners.

Under the terms of the Federal/Provincial Agreement 85 coal miners were again employed clearing the debris from the roadsides between Sydney and Louisburg, and thinning forest stands in the Mabou area. The agreement also made possible a number of projects carried out by Department personnel on Crown lands, including access road construction, stand improvement, forest inventory and reforestation.

Lands for the new Kedge National Park, now called Kejimkujik, had been expropriated, and the Surveys Division was engaged in establishing the boundaries around some 93,000 acres. Much of the land in the new park belonged to the Province and to Bowater Mersey Paper Co., and, fortunately for the Crown, a large block of woodland was offered for sale which the Province purchased and exchanged with the Company for land expropriated. No permanent homes were included in the expropriation, but two homes were purchased, along with some additional land to provide a better park entrance. A goodly number of summer camps and two commercial operations were expropriated, but all settlements were made without going to court.



Mrs. Susan Hilles (nee Morse) and Wilfrid Creighton unveil a plaque to commemorate her donation of the 430-acre Morse Estate at Paradise, Annapolis County, to the Province in 1966.

The Crown Land Survey that year enclosed an additional area of 28,866 acres, bringing the total area surveyed to 2,907,216 acres. Some 27,710 acres of forest land were purchased and added to the forest reserve, and 537 acres were purchased for Provincial Parks. From an estimated Crown land area of 3,037,023 acres, 1,074,728 acres (located in Pictou, Antigonish, Guysboro, and the four Cape Breton counties) were now leased to Nova Scotia Pulp Ltd.

The Parks Division, which dated from 1959, was now operating 10 camping parks, 26 picnic parks and 27 roadside table sites; and new parks were under development at Mira, Cape Breton County, Beaver Mountain, Antigonish County, Porters Lake, Halifax County, and Graves Island, Lunenburg County.

During the previous summer the Hon. E.D. Haliburton led a delegation to Scotland and Sweden to see and learn from forestry practices in those countries. In both, economic conditions were vastly different from those in Nova Scotia. In Scotland the small area of forest was owned largely by the Forestry Commission, and large sums were being spent to plant new forest on very difficult sites. A high percentage of trees being planted were West Coast Canadian species, notably Sitka spruce and Douglas-fir. Some phenomenal growth was obtained—but at enormous cost. In Sweden the pattern of land ownership was almost identical to that of Nova Scotia; but here the similarity ended. Except for a small area in the south where some beech and oak were grown, the forests were largely pure stands of Scots pine and sometimes Norway spruce.

In both countries the prices paid for roundwood products were greater than in Nova Scotia. In Sweden the price paid for standing trees to provide the equivalent of a cord of rough wood amounted to some nine dollars in Canadian funds, while the Swedish company then operating at the Strait of Canso was paying the Nova Scotia Government one dollar for a cord cut on Crown land.

Of course the forests in Sweden had been under intensive management for many years. A system of all-weather roads was in place, the trees had been planted, thinned and carefully nurtured. There were no dead, sickly, or broken trees in the stands being harvested, and very considerable

In June, 1965 a delegation of Nova Scotians visited Sweden to inspect forestry operations. Left to right: Hon. E. D. Haliburton, Minister; the author, Don Eldridge and Gordon Maybee.

The author (left) posing with Gordon Maybee and a large Sitka spruce on a Scottish estate in 1965.

sums had been spent to bring the forest to this state of high yield and top quality. Another interesting feature was the public's awareness of the value of the forest and of the forest industry, and the people's behaviour when in the woods. No empty bottles, tin cans or discarded tires were in evidence, nor any of the piles of unsightly rubbish so common in this province. The forests were park-like in appearance—and in fact were better treated than any in the parks of this country.

Fire did not present any serious problem, partly because the forests were free of logging slash, dead and windthrown trees, and partly because of the care exercised by the general public. The young plantations were susceptible to fire, but fires did not start. The Swedes then were free of the enormous sums spent here on forest fire protection, and the money saved was available for more productive purposes.

In addition to Mr. Haliburton, those making the trip were Gordon Maybee, Lloyd Hawboldt, Don Eldridge, Charles Harrison and myself.

Back in 1956 when negotiations with Scott Paper Company terminated, the president of the company intimated that a pulp mill might be built in Nova Scotia in 10 years' time. By 1964 the company was showing renewed interest, and on March 30, 1965, legislation was passed entitled The Scott Maritime Pulp Limited Agreement Act 1965. Under the terms of the agreement the company was to proceed with the erection of a mill in Pictou County having a minimum rated capacity of 500 tons of bleached kraft pulp per day. The Province in turn agreed to lease to the company, for a period of not less than 50 years, 230,000 acres of Crown land in Halifax County.

Construction of the mill was to start on or before April 30, 1965, with the mill to be in operation by March 31, 1967. Before the start of the mill and for 10 years thereafter, stumpage cut on Crown land was to be paid for at the rate of two dollars per rough cord of softwood and 50 cents per cord for hardwood. The price paid for trees cut for any purpose other than pulpwood was to be mutually agreed upon at the start of each calendar year. For a second 10-year period the stumpage price was to be determined by a somewhat complicated formula, and for any succeeding 10-year periods at rates to be mutually agreed upon.

The company in turn gave its undertaking to plant trees of commercially desirable species on land not found to be satisfactorily restocked 10 years after cutting. The agreement did not restrict the use of the land for other purposes such as mining, trapping, hunting and fishing, and the Province retained the right to withdraw land needed for railways, power lines and for improvement purposes, provided the land withdrawn did not exceed one per cent of the leased area. The company was required to prepare management plans for the lands held under lease and these plans had to be submitted to the Department of Lands and Forests for approval before cutting commenced.

The Mapping Section of the Surveys Division was now working on new Crown land forestry maps at a scale of 20 chains to the inch. This set of maps was to consist of 537 sheets conforming to the National Topographic Series.

The Forest Inventory Section continued to work on the seven-year continuous inventory, and a system of 1/10-acre circular plots had been started to provide information on growth and yield. The programme required the random establishment of 250 plots per year until 1,750 plots had been located over the seven-year period. The plan called for the plots to be remeasured at five-year intervals, so plots laid out in 1965 would be remeasured in 1970. The aerial photography for Lunenburg Subdivision was completed, and as the photos were delivered they were checked for scale, overlap, blemish, and so on, and, if satisfactory, passed on to the photo-interpreters who classified the forest by density, height, site and species. The field crews then proceeded with the establishment of temporary and permanent sample plots and eventually the final type maps were produced.

In co-operation with the Dominion Bureau of Statistics, the district staff conducted the annual survey of forest production, obtaining the necessary information from pulp mills, sawmill operators and from consumers and exporters of wood products.

The forest nurseries produced over 900,000 trees. Some 690,000 were planted on Crown lands, 211,000 on private land and 2,000 in camping and picnic parks.

During the year the Department operated 30 fire towers, and a new tower was built to be used in 1966. The aerial patrol was carried out by two Super Cubs, one Cessna and a Beaver; during hazardous periods a large water bomber was leased from the Province of Quebec. Fire losses were above average, with 783 fires burning 14,866 acres. Thirteen fire equipment depots were in operation and fire suppression crews were again stationed at Chignecto and Stanley.

The Extension Division supplied films for 1,545 showings to an audience of 129,500 persons and a hunter safety course was provided in co-operation with a number of gun clubs. A programme of woodlot forestry was promoted through group meetings and field days, with particular emphasis on the development of Christmas trees from natural stands. Advice was also provided on the location of roads and fire ponds, and 380 woodlots were visited, 262 for the first time and 118 as follow-up visits.

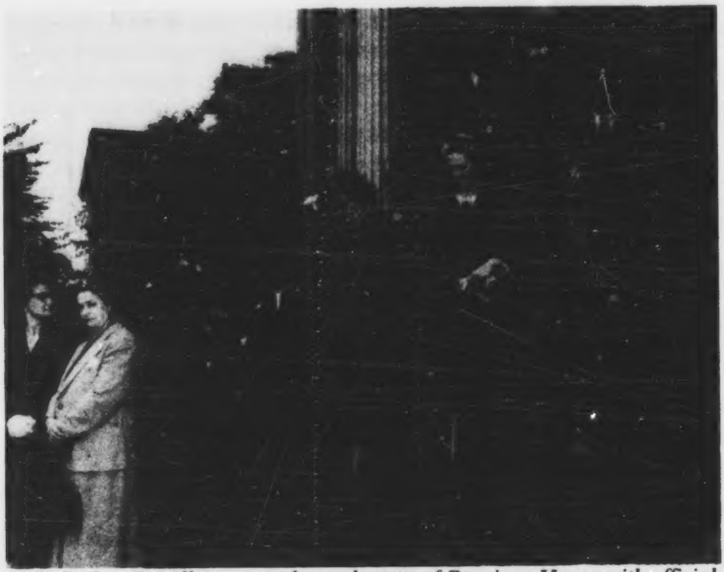
The Parks Division started development work on new parks at Mira River, Ben Eoin and Mabou on Cape Breton Island; James River, Antigonish County, Two Mile Lake and Marie Joseph, Guysborough County. The number of persons visiting existing parks continued to increase.

The year 1966 marked the fortieth anniversary of the merging of the Department of Crown Lands with the Department of Forests and Game to form the Department of Lands and Forests. From a very small beginning the Department had grown slowly and now had a permanent staff of 370 with some 250 more employed seasonally. In comparison with some other departments, Lands and Forests was still small. But it was no longer the friendly unit where everyone knew everyone else; in the process of growing, something was gained but something was lost.

The Hon. E.D. Haliburton as Minister was head of the Department, assisted by G.W.I. Creighton as Deputy Minister and R.H. Burgess as Administrative Assistant.

The Department now had five divisions headed by Directors:

Extension — L.S. Hawboldt
Forestry — G.R. Maybee
Parks — E.S. Atkins
Surveys — H.B. Robertson
Wildlife — M.H. Prime



Lady Baden-Powell (center), descends steps of Province House with official party on her way to plant a commemorative tree in the late 1960s. Wilf Creighton (beside central pillars) arranged to have the hole dug, "but she insisted on shovelling and tamping the earth herself".

Undoubtedly there should have been a sixth division, Accounting, and more credit should have been given to Fergie Ferguson, Harry Lynch, Thomas H. Cater, Norman Matheson, John Doyle and others, since good accounting is the foundation on which any department, as well as any business, depends for success.

Very recently a former Minister remarked that when he became Minister of Lands and Forests he found it run more like a business than a government department. No doubt this resulted from the fact that for many years Lands and Forests was required to show a surplus of revenue over expenditure, and this had been drilled into the senior members of the staff. While expenditures now far exceed revenue, the desirability of increasing revenue and avoiding unnecessary expenditure has always been kept in mind.

The wide gap between revenue and expenditures may be narrowed to a marked degree when the Crown lands become more productive, when the Department receives adequate compensation for Crown stumpage, when less money has to be spent on fire protection, when the Crown land survey finally is completed, and when there are fewer free handouts to private landowners. However, with revenue coming largely from some three million acres of public lands and expenditures spread over an additional area of seven to eight million acres of privately owned woodland, it will be difficult to make revenue and expenditure balance.

Some members of the staff retired during 1966 and there were some other changes in the Department. Early in the year Rusty March, Director of Surveys, retired after a long and distinguished career and was replaced by Bert Robertson. In May, Gerald Phinney, District Forester for Lunenburg, resigned and accepted employment outside the province and in September Ed Boulter retired.

The Forestry Division was reorganized, and for administrative purposes the province was divided into four regions under Regional Foresters, to whom the District Foresters and other personnel now reported. This change had some merit, but it added another layer of bureaucracy and put four senior foresters in offices, thereby removing them from the woods where their experience was needed.

These new regions were: a Western Region under Regional Forester Harry J.A. Grant with office in Yarmouth, a Central Region under Aubrey D. Brown with office in Truro, an Eastern Region under Angus MacMillan with office in Antigonish, and Cape Breton under Allister Fraser with office in Baddeck.

A number of changes were also made in the districts. Lunenburg and Queens counties were joined to form a single district with Lyndon Gray as District Forester. Shelburne, Yarmouth and Digby counties formed a district with John Cooper in charge. Annapolis and Kings counties became another district, under Martin Butler. Hants County remained a district, but the Stanley Management Unit added greatly to the workload. After Ed Boulter retired as Assistant Provincial Forester he was replaced by R. Lee Bushell as District Forester for Hants County.

Colchester County continued as a district, under Keith MacKay. Because Cumberland County's Aubrey Brown was transferred to Truro as Regional Forester, Provincial Ranger Joseph H. Beattie assumed the duties of Acting District Forester there. The Chignecto Management Unit was put in the charge of Gerald Lapointe as Resident Forester. Millan MacDonald was District Forester for Pictou County, but later in the year was transferred to the Parks Division. Antigonish County. The Municipality of St. Mary's became a new District with Richardson Michaud as District Forester. Guysborough Municipality remained a district, with John Semple in charge. Halifax County, a larger county with considerable Crown land and numerous problems because of the relatively large population, had David Bradshaw as District Forester. Inverness and Victoria counties formed a district with Allister Fraser in the dual role of Regional and District Forester, and lastly Cape Breton and Richmond counties were presided over by District Forester Herbert T. Short.

The Crown lands were becoming more productive. Increasing quantities of logs, pulpwood, poles and firewood—particularly from the Management Units at Chignecto, Stanley and Lake George—were being harvested, and Nova Scotia Pulp Ltd. was now cutting pulpwood on its leased lands.

With a view to ensuring that the scaling of roundwood products was uniform throughout the province, George MacQuarrie, a graduate of the Ranger School employed by the Department since 1957, was appointed Chief Scaler to carry out checks where needed. His duties included an active part in the Scalers School, which offered a short course annually at Shubenacadie, and he was preparing a manual for scalers.

Fire protection continued to demand constant vigilance, effort and expense and additions and improvements were being made to the system each year. As funds became available, more fire equipment depots were built, more equipment was purchased, aerial patrols and the communication systems were improved and more and better trained men were employed. While 14 depots were in operation, Shubenacadie remained the nerve centre and headquarters for fire protection.

Firefighting crews were now located at Lewis Lake, Lake William and Musquodoboit Harbour, all in Halifax County. For some years crews had also been stationed at Stanley, Hants County and Chignecto, Cumberland County. These standby crews had proven their worth, and more were needed to replace the untrained volunteers on whom the Department had depended in the past.

At Shubenacadie, in addition to the storage and repair depot, there was a carpenter shop, a cookhouse, a bunkhouse, and a landing field for light aircraft. The Repair and Storage Depot was in charge of Owen Barr, assisted by Rupert Fisher, John Dickie, Randal Cock, Hayward Strang, Myron Winters and John Taylor. A new radio system was in operation featuring two-way radios in the fire depots, the district offices and the fire towers, as well as in the aircraft. A new Beaver aircraft had been purchased, and the Power Commission Beaver was available when needed. At least one aircraft was now kept on wheels, and in the winter one or more were equipped with skis. The cookhouse was presided over by Selbie Rogerson, who had replaced Eldon McCall, and the carpenter shop was in the charge of Charles MacKenzie assisted by Weldon Fisher.

Approximately 900,000 trees were planted on Crown land, and that year marked the real beginning of operational silviculture on unleased Crown land in Nova Scotia with 9,803 acres treated.

Forty-nine parcels of land totalling 30,991 acres were purchased and added to the public holdings and 481 acres were purchased for park purposes. The Surveys Division continued surveying and mapping the Crown lands and during the year purchased a Model 6 Geodometer, an electronic instrument capable of measuring distances by means of a modulated light beacon. This beacon was visible up to two miles in daylight and 10 miles during darkness. The Geodometer was necessary to obtain more accurate horizontal control for photogrammetric mapping with the Kelsh Plotter and for the resurvey of county lines.

The Extension Division was active, and motion pictures were shown 1,400 times to an audience of 132,000 persons. Material was prepared for the newspapers, radio and T.V., and newsletters and bulletins were written and distributed. Through the services of the Forest Products Development Ranger, technical advice was given to sawmill operators and a total of 183 sawmills were visited. The Extension Foresters also gave advice on reforestation, stand improvement, Christmas tree culture, access roads and the building and location of fire ponds.

The Wildlife Division, like the Department as a whole, had been growing slowly. Merrill Prime, who had started with the Department in 1961, had been made Acting Director in 1964 and had been appointed Director in 1965. Neil van Nostrand had been given a temporary appointment in 1958 to carry out a study on ringnecked pheasants, but now as a full-time employee devoted most of his time to furbearing animals. Fred Payne had worked for the Wildlife Division from 1961-65, had taken employment elsewhere for a short period, but returned in 1966 to work with waterfowl. Arthur Patton had joined the staff in 1964 and concentrated on moose and white-tailed deer. In co-operation with Ducks Unlimited (Canada) the Wildlife Division carried out considerable development work on the 6,500-acre Missaguash Marsh in Cumberland County. Water control structures were built, some areas were flooded and pot holes blasted, and 826 ducks were banded.

A total of 57,616 big game licenses was sold and it was estimated that 24,110 deer were taken. There was a short open season on moose from September 17-28 in Cumberland, Colchester, Pictou, Antigonish and Guysborough counties. Eight hundred licenses were issued by lottery and 361 moose

Annual meeting of the Canadian Institute of Forestry, Chicoutimi, Quebec, 1962. Left to right: Wilfrid Creighton, President; Premier Jean Lesage; Dean Bernard Sisam, University of Toronto, Faculty of Forestry. (The latter was a U.N.B. graduate from Springhill, N.S.). Studio Ben Hamilton photo.

were harvested. The black bear was now classed as a game animal and 205 were legally taken.

A Law Enforcement School for Department personnel was held at Shubenacadie under the direction of Law Enforcement Co-ordinator Fred A. "Skip" Sturmy with instruction provided by members of the Department, the R.C.M.P. and a Provincial Magistrate.

The Provincial Entomologist reported that the European winter moth was now practically non-existent, but that the spruce budworm was defoliating old-field spruce in eastern Nova Scotia. The annual insect collection was made with the assistance of Rangers Percy J. Sawler, Ralph K. Wheadon, John J. Jones and Charles L. Milner, all from Halifax County.

In February 1967, George Johnson, flying the Cessna between Windsor and Waverley, crashed, killing himself and demolishing the aircraft. This was the first serious accident during the years since an aerial patrol had been flown for the Department. A few months later pilot Gordon Gray lost his life in a flying accident as a passenger in a private plane on a weekend fishing trip.

The Department had purchased a second Beaver and a Maule, so with the two Super Cubs it still had five aircraft. During the fire season all were mounted on floats. One Beaver was stationed at Waverley, the second at McGowan Lake, Queens County. One Cub was kept at Waverley and the other was located in Cape Breton during the fire season.

The radio system was improved with 41 sets in operation and further additions planned. A three-day fire suppression training course was held at McGowan Lake for 25 members of the Department, with a member of the Ontario Forest Service acting as Chief Instructor. Later two Rangers were sent to a five-week course at Cedar Lake and Dorset, Ontario.

Included in the firefighting equipment now owned by the Department were 357 motor pumps and 5,211 back tanks, along with miles of linen motor hose, thousands of hand tools, bulldozers, tanker trucks, Jeeps and miscellaneous equipment such as tents and camp kitchens.

During the year 318 fires burned 5,767 acres, compared with the 10-year average (1957-66) of 483 fires and 7,614 acres burned. While this might appear to be some slight improvement over past years, there was no room for complacency. Two of the greatest problems, namely public apathy and fire hazards such as logging slash and public dumps, remained.

A total of 980,000 trees was provided by the forest nurseries for outplanting, with 455,000 planted on Crown land, 491,000 on private land, 5,000 planted in Provincial Parks, and 28,000 for Centennial tree planting projects. With the purchase of additional land west of the Lawrencetown Nursery, together with land at Margaree, Inverness County and at MacLellan's Brook, Pictou County, a forest tree nursery expansion was in progress. Former District Forester Robert K. Allen was put in charge of all nursery operations.

The Parks Division, headed by Earl S. Atkins, continued its task of developing camping areas and picnic parks and selecting sites for future development along public highways and at the seashore. For some years it had a workshop at Debert where park signs, picnic tables and small buildings were made and maintained. Due to the seasonal nature of the parks, the permanent staff was relatively small. It was augmented by seasonal help and was assisted by the District Foresters, many of whom had taken an active part in park development from the very beginning.

Crown Survey parties ran boundary lines around 27,268 acres. The area surveyed now totalled 3,001,542 acres, an area considerably greater than the Province owned when the survey started in 1934. In co-operation with the federal government, a co-ordinate survey was started. The first survey post was set just south of the Provincial Building in Halifax and was officially dedicated by Lieutenant-Governor McKeen as a Centennial project. Some 34,528 acres were purchased and added to the forest reserve and 1,392 acres were obtained for Provincial Parks.

The second Law Enforcement School was held at Shubenacadie under the direction of Fred Sturmy with over 50 Department personnel in attendance. Again a senior RCMP officer and a Provincial Magistrate instructed.

Fall population inventories of ducks and geese were continued, together with banding operations. Previous studies had shown that the majority of birds breeding in Nova Scotia were year-round residents, while other over-wintering birds were largely from Quebec and Newfoundland. Black ducks banded in Nova Scotia had been shot as far south as South Carolina but most taken outside Nova Scotia were shot in Massachusetts and New Jersey.

The Wildlife Park reported a yearly attendance of about 200,000 people, and two million had visited the park since 1954.

The Annual Report for the fiscal year ending March 31, 1968, was signed by E.D. Haliburton, Minister, but he resigned early in May and was replaced by Steven Pike, former Minister of Highways. Mr. Pike remained Minister of Lands and Forests for only three months—too short a time to become familiar with the Department—but he visited extensively during that period and appeared to be a very good Department head. The most notable event of his short term of office was the official opening of Porters Lake Provincial Park, Halifax County in July. Mr. Pike resigned shortly afterwards and was succeeded by George A. Snow. Once again the Department was fortunate in having at its head a man of sound judgement who took an active interest in his new Department.

During the year an inventory of forest production revealed that the quantity of wood produced in the province had reached the highest volume in recent years. This figure resulted from a growing use of pulpwood, now amounting to over one million cords, of which 910,247 cords were roundwood and the equivalent of 118,339 cords was in the form of chips from sawmill waste. The sawmills in turn cut 189,884,000 F.B.M. of softwood lumber and 5,694,000 F.B.M. of hardwood, along with boxwood, laths, shingles, railroad ties, mine packs and other miscellaneous products.

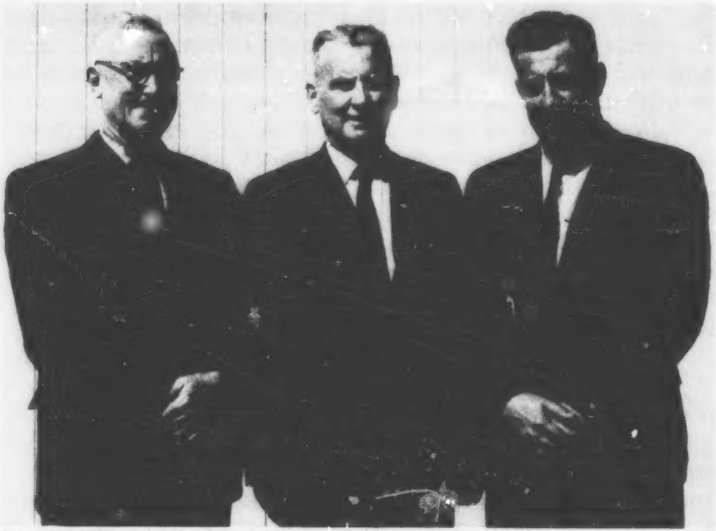
Foresters and Rangers made 900 calls on private woodlots to encourage better management. Until recent years the bulk of sawlogs and much of the pulpwood had come from the small private woodlots, but now increasing production from Crown land and large-scale cutting on company lands had reversed that situation. Potentially the small woodlot was capable of yielding much more wood, because the private woodlots were on sites better than much of the Crown land and as good as or better than the company lands. Furthermore they were more readily accessible, since they fronted on or were adjacent to public highways. This reduced operating costs and often eliminated the need for expensive roads. However, until the price paid for roundwood increased, the task of selling intensive management to the small landowner remained difficult.

Christmas tree culture, which under favourable conditions could show a reasonable return on labour and expenses in a few short years, was easier to sell than long-term management, so it continued to be promoted by the Extension Foresters. A number of Christmas tree illustration and experimental plots had been established during the previous few years. These were located at Lake George, Kings County; Harmony, Queens County; Brown's Lake and Antrim, Halifax County; McElmond's Pond, Colchester County; Greenville, Cumberland County; Crystal Cliffs, Antigonish County; and Two Mile Lake, Guysborough County. In addition about 25 temporary plots were under study to obtain information about thinning, pruning, shearing, and the use of fertilizer and chemical weed control.

Apart from its Christmas tree lot the 176-acre Antrim woodlot had now been under careful management for 17 years, and presented a rather pleasant contrast to much of the woodland in Nova Scotia. Financially the woodlot did not show any profit, but to break even as it did with Civil Service wages and Civil Service hours of work was little short of remarkable. The woodlot now had a good road system, a fire pond, an attractive log cabin and some fine stands of timber with a good distribution of age classes. Moreover, production and cost figures were available, which offered useful comparisons for any woodlot owner.

Some 6,150 acres of Crown land were given silvicultural treatment, and tests were conducted on applying fertilizer and herbicide from fixed-wing aircraft. This work was directed by George Ross, a Scottish forester who had been working for the Department for several years but who soon afterwards left for employment in Quebec.

About 304,000 trees were planted on Crown land, 353,000 on private land and 2,000 in Provincial Parks and around fire equipment depots. In co-operation with the Federal Forest Service, studies were carried out on Crown



Dr. Creighton in the late 1960s with Hon. E. D. Haliburton (center) and Bob Burgess, Provincial Forester. Bob Jones photo.

As President of the Nova Scotia Forestry Association, the author chats with a poster contest winner. Bob Jones photo.

lands in Yarmouth and Shelburne counties on lands which had little or no forest cover. Trial plantings were made, and soil and site improvement work were completed in preparation for future planting.

In this part of Nova Scotia there are extensive areas strewn with granite boulders. The soil is poor and underlain by hardpan. The whole area has been burned repeatedly, sometimes in the hope of obtaining blueberries and often by hunters who liked to be able to see and shoot for long distances. In the swales there is usually some tree growth, and here and there an island of trees has escaped fire. For some years trees had been planted on a few of the better sites, notably to the rear of Quinan, with encouraging results. While the task of getting trees to grow in this region is difficult, sites even more difficult have been afforested in Scotland, admittedly at great expense but with remarkable success. Over a long period of years this land has supported spiraea, rhodora, lambkill and other heath plants which have developed a dense mat of roots and raw humus which inhibit tree growth. When a tree did manage to start growing, it was browsed by moose, deer, porcupine and snowshoe rabbits.

The whole area presents a great challenge, and while the task of reforesting or afforesting is difficult, it should not be insurmountable. For many years the only access to the country was on foot or by ox-cart, but the Department has built a good truck road from Indian Fields, Shelburne County to East Kempville, Yarmouth County, affording easier access to much of the territory.

The small permanent staff in the Parks Division was finding it increasingly difficult to keep up with the growing workload during the summer months, so some of the development and maintenance work was now transferred to the forestry staff in each district, giving the parks personnel more time to devote to planning.

Park development continued at Mira River, Battery, Porters Lake, Smiley's, Valleyview, Ellenwood Lake, Graves Island, Beaver Mountain and Blomidon, and it was expected that Mira River, Battery, Valleyview and Ellenwood Lake would be ready for their official opening in 1969.

The Extension Division continued to operate in its usual efficient way. For some years Gary Saunders, a forester with more than usual ability as a writer and artist, had been a valuable addition to the Division, writing articles and producing illustrated booklets that were welcomed in the schools and by the general public. Ralph Hale, a former District forester with the ability to adapt to a variety of jobs, was proving himself a very capable radio commentator on matters relating to forestry. Tom Ernst, David Dwyer and Leroy Wright were actively engaged in promoting woodlot management, while forester Ronald H. Day concentrated on youth work. Last but not least, John Ward supervised and maintained an expanding audio-visual equipment pool and film library, with Lawrence Levy and Munroe Withrow continuing to show motion pictures in the schools and to a varied adult audience full-time. In addition, district staff showed films and gave talks as time permitted.

Because of increased work resulting from the co-ordinate survey and an agreement between the Province and the Atlantic Development Board to produce a series of new topographic maps, the Surveys Division was divided into four sections: Crown Land Survey, Co-ordinate Survey, Air Survey and Drafting and Mapping.

With the modern instruments now owned by the Surveys Division, replacing the time-honoured compass and chain, it was possible to carry out surveys with a degree of accuracy not dreamed of only a few years before.

With these new instruments in the field and computers in the office, the work in this division had changed drastically. A new breed of surveyor had emerged; but survey costs had risen dramatically, and the old woods surveyor who had managed with a staff compass, a field book, a one-chain tape, 11 chainage pins, a few axes and his lunch kit, had, like the old soldier, quietly faded away.

An additional 43,260 acres were reconveyed to the Crown, requiring prompt survey, and the area of purchased land now totalled 796,438 acres—slightly more than three quarters of the target of one million.

While the purchased land had been logged or burned, it was on the average potentially more productive than the other Crown holdings. Indeed, a considerable portion of the purchased land was now yielding forest crops and had repaid its purchase price many times over.

While the exact area of Crown land cannot be known until the completion of the survey, it should total at this time about 3,156,000 acres.

During the winter, Wildlife Biologist Neil van Nostrand organized a provincial Trappers Meeting at Shubenacadie. This was attended by about 100 trappers from most regions of the province with visitors from New Brunswick, Prince Edward Island and Ontario.

Experienced trappers demonstrated proper methods of skinning, cleaning, stretching and drying furs. Before the meeting ended, a Nova Scotia Trappers Association was formed with the objective of promoting a better appreciation of the fur resource, to provide for the better preparation of pelts, and to obtain better prices for the trappers. During the meeting new and more humane traps were displayed which it was hoped would replace the leg-hold trap.

Under the direction of Biologist Fred Payne, an aerial reconnaissance was made of eider duck nesting sites along the Eastern Shore of Halifax County, with a significant number of nesting birds being counted. Since the creation of the bird sanctuaries at Martinique Beach and Missaquash Marsh, the population of ducks and geese had increased, and the Wildlife Park at Shubenacadie resulted in more waterfowl in the surrounding area. Wood duck in particular appeared to benefit from the work at Shubenacadie.

A number of ptarmigan were obtained from Newfoundland and released on Scatarie Island, Cape Breton. Here the habitat appeared suitable and it was hoped results would be more favourable than in the Waverley Game Sanctuary where birds had been released many years before. This project was a moderate success.

Over the years both revenues and expenditures had increased. But because of many programmes, including parks, extension, grants to woodlot owners and various associations, and a greatly enlarged staff, expenditures had far outstripped revenue.

For the fiscal year ending March 31, 1969 the revenue was $930,630, ordinary expenditure $3,746,244 and capital expenditure $1,047,973. Broken down, these are as follows:

Revenue

Provincial Land Tax	$ 74,371
Fire Tax	31,838
Timber & Fuelwood Licenses	215,014
Selective Cutting	62,743
Leases and Grants	8,685
Game and Fishing Licenses	431,275
Fines and Forfeitures	27,204
Royalties	10,034
Admission Fees, Campgrounds	51,348
Miscellaneous	18,120
	$ 930,632

Ordinary Expenditures

Administration	1,603,425
Fire Fighting Equipment & Fire Towers	831,408
Forestry	489,869
Wildlife Park Maintenance	68,617
Wildlife Conservation	336,854
Extension Service	169,491
Campground & Picnic Parks	244,080
Municipal Camp Site Account	2,500
	$ 3,746,244

Capital Expenditure

Surveys	$ 299,489
Fire Fighting Equipment & Fire Towers	170,681
Forestry Equipment	29,087
Forest Inventory	159,443
Road Construction on Crown Lands	59,461
Reconveyance of Land to Crown	329,812
	$ 1,047,973

Epilogue

The work of the Department covering the fiscal year 1968 ended on March 31, 1969 and yours truly retired at the end of May that year. It is therefore not my intention to carry the story of the Department any further, other than to mention that during the next few months under the new Deputy Minister, the Department was reorganized and expanded. The new Deputy, Robert H. Burgess, had been with the Department for many years and was a very capable forester with whom it had been my pleasure to work. He had been trained to succeed to the position and with him at the helm the Department was in good hands.

Looking back over my 35 years with the Department of Lands and Forests, I often smile to remember that I, who started out with private industry and who never planned to work for any government, should have ended up for such a long period in government service.

It seems only yesterday that I was the young radical forester eager for change, and impatient because change could not come faster. Over the years I learned that to get things done, you often had to wait till some superior decided that what you wanted to do was his idea, and that if you could look back over a 10-year period and see reasonable progress you had to be content.

It was my good fortune to work under a succession of good Ministers, some of whom in my opinion were better than others but none of whom was incompetent. It was always a pleasure to work with other members of the staff, and it was interesting and satisfying to watch young men and women join the Department, then develop and assume responsible positions in the Department and elsewhere. During my 20 years as Deputy Minister I had only one Secretary—Mary Murphy—and since she was both efficient and pleasant she made my task much easier.

I am conceited enough to think that I was good for the Department and for the province, but by 1969 it was time to step down and let someone younger with fresh ideas take over. As I retired with pleasant memories, I promised myself that I would never try to reach out with a dead hand and interfere with the running of the Department and I believe that I have kept my promise.

Dr. Creighton, as president of the Nova Scotia Forestry Association, helps with an Arbor Day planting at Titus Smith Elementary School, Spryfield, 1974. Wamboldt-Waterfield Photo.

Fine stand of eastern hemlock-white pine near Pollard's Falls, Shelburne River. The largest hemlock in this stand measured approximately 48 inches DBH.

EDITOR'S NOTE

The reader may wonder why this book was not published sooner. The reason is that Ralph Johnson's large and complex manuscript — for which this was originally written — proved a major editing and publishing task. At the same time it became apparent that Dr. Creighton's text, though incorporated in Mr. Johnson's book, deserved separate publication once that work was available. The Forests of Nova Scotia appeared in 1986; Dr. Creighton's history now takes its place beside it.

Gary Saunders

Truro, Nova Scotia
October, 1987